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THE JOURNAL
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Vol. XXV. TOPEKA, KANSAS, JULY, 1925 No. 7

The Present Status of Medical Education

H. J. DUVALL, M.D., Hutchinson

Read at Annual Meeting of the Kansas Medical Society, Topeka, May 5-7, 1925.

The requirements for securing the degree of Doctor of Medicine are too high. The intellectual or so-called leaders in the profession have led us up into the heights of knowledge so high that none but the ablest financially can make the climb. Thus, automatically cutting out the average young man from securing a medical education in the regular schools. Creating a shortage of physicians in the rural regions and in the smaller towns. This shortage is getting to be so marked as to create considerable comment in the national publications and even in the columns of the Journal of the A. M. A. No young man is going to spend from eight to twelve thousand dollars and seven years' time in securing the present day medical degree, and then go out in a rural community and practice medicine.

In fact, I have a son in medical college at the present time and this cost of securing a degree is very forcibly impressed on my mind and pocketbook. I advised him that if he could make a good connection in the city to stay there and not come back to the old home town to practice with me.

These high requirements also work to fill the ranks of the irregular schools or the irregular cults. A bright young man of limited means wanting to enter medicine comes to you to find out the requirements. He finds these so high that he gives it up. But many of them sooner or later decide that since they can't enter the ranks of the regular men, and they still want to be physicians, enter an Osteopath or Chiropractor school. Many of these young men are well meaning and would make excellent physicians if they were able to finish the course, but are debarred by the time and money requirements that we now are demanding.

Whether we know it or not, we have attempted to create auxiliary practicioners. In the nursing course we teach the nurses more things than they need in the practice of their work. We teach them obstetrics, materia medica, therapeutics and many things they do not properly need. And, gentlemen, I want to tell you that you will find many of our nurses prescribing and treating patients. In our city we have one school nurse, another working for some National Child Welfare association and two city nurses. I find that many families call in one of these nurses insead of a physician in many cases of illness especially in women and children. The six year course as now required with its loss of time and expense is filling the ranks at the top with Jews, and at the bottom with the Osteopath, Chiropractor, and such ilk.

What I mean by the Jews entering the profession in an abnormal per cent is well illustrated by a statement one of our Jew clothing merchants made about himself. This man is not an orthodox Jew and has been a thorn in the clothing business in our town. He got into financial difficulties a year or so ago and was about to go to the wall. The other Jews said: "Jessie is hard competition, but he's a Jew, lets put in $500.00 a piece, and help him across." This was done and he is still in the clothing business. Whenever in a poor Jewish family, a boy shows talent for medicine all the uncles, aunts and cousins, as well as brothers and sisters, pool resources and put the bright lad through school. That is one of the reasons why the profession in New York City is largely filled with men of Jewish origin. In Chicago nearly a majority. And St. Louis is rapidly becoming Jewish in medicine.

The Anglo Saxon family won't pool resources, therefore the young fellow of that blood and type lacks the resources that the Jewish ones do. As an illustration of what I mean: several years ago I delivered a boy, the first born to that family on my birthday. I happened to speak of it and the father and mother very promptly named the boy after me. This lad is now in high school and last fall came to me for advice in regard to what course to take because he wants to study medicine. He is

a bright forceful youngster, a leader in his school activities, but his father is a motor man on a street railroad company which is now in receivership. What show has the boy to spend seven years in school and six to ten thousand dollars in money to earn the Doctors degree in Medicine. It can't be done.

Dr. Colvin writing for the Journal of the A. M. A. stated that a bright young man can work his way through medical school. To those conversant with the time used per day in doing the school work in medicine this statement is absurd. No young man can carry full course and do any outside work whatever. The course is so crammed with a multitude of connected and disconnected facts that the schools are trying to teach students, in order to fill up the six year period, that no student has any time for outside work. I had a young man, a graduate of a Chicago school join me about five years ago. He came out quite a finished laboratory man, doing all of the usual laboratory tests, but I noticed after about a year of it that he was sending all of his work over to the Dupray Laboratory to a man that does professional laboratory work. When I asked him about it he said his equipment was short. Took too much money to fix it up and too much time. And in addition the expert's reports were dependable.

The domain of medicine is so extensive and the mass of related and unrelated facts are so enormous that one man can not encompass the whole thing. The best that can be done is to ground the student in the fundamentals, the essential things, teaching him where to go to solve his problems, then letting him send his particular problem to that place; i. e., the exceptionally well manned laboratory or the surgeon or the brain man or the psychiatrist. In the colleges they do not use the encyclopedia as a text book in English, but do use it as a reference book. In other words the schools are trying to teach, in order to fill out the six year course, an amazing mass of facts, are trying to make specialists out of the neophyte. Cut this out, teach fundamentals, shorten the course. Let each man specialize when he finds out what he wants to specialize in, and his experience in general medicine will make him a better specialist. Instead of teaching all students to be skilled laboratory men I think that the fundamentals of bio-chemistry, physiology and pathology should be taught. Leaving the postgraduate school for the laboratory man to finish in.

In my humble opinion four years' work in medical school after completing a standard high school course should make a good Doctor. In fact, one-half of the men before me, I venture to say, are three year men and you are pretty good doctors too, aren't you now? The three year colleges in the past turned out men in this state such as Dr. Klippel of Hutchinson, Axtell of Newton, Fabrique of Wichita, Reynolds of Horton and a host of other men. No finer class of men could be asked for. If the colleges can't make a good doctor in four years from high school they are not doing their duty, and are wasting the people's money.

Destructive criticism is easy and now I want to offer a constructive thought. I would suggest that the colleges in conformity with the continental custom of granting degrees that has been adopted in this country, give a four year course from high school in medicine and grant the degree of Bachelor in Medicine. Require five hours in inorganic chemistry in the high school. Teach organic chemistry, biochemistry, physiology, pathology and anatomy during the first two years, finish the clinical studies in the last two years. Amend the statutes of the different states changing the requirements of the statutes demanding the degree of Doctor in Medicine to one of Bachelor in Medicine. Then after the man takes another year following graduation grant him his Master's Degree. When he takes his sixth year give him the Degree of Doctor in Medicine. I think all of the state universities should set up this system, leaving the heavily endowed semi-private schools to proceed as they see fit, or as they are doing now. This will decrease the number of men going into irregular medicine and increase the supply of rural physicians.

For an illustration of what too high requirements can do and the way of evading them. I am reliably informed that a past president of this august body moved to California several years ago and attempted to register in that state. This was during the time that the regular physicians had closed shop laws in that state and he was unable to qualify. He was in earnest about getting into practice, so took six months course in an osteopathic school and registered as an osteopath and very blithely resumed the practice of medicine. The law makers in California evidently took away

from the regular physicians the autocratic power they then enjoyed. That is a prerogative they can take from us at any time the people decide to do so, providing there is enough of a demand.

To summarize: too great a mass of medical knowledge is in existence today for one man to use himself. In trying to impart this knowledge the course is spread over six years and the man over-educated.

Too many American youths enter the medical service of the community by the "irregular" doors.

Americans will not be satisfied with the European medical service, viz: only the higher class having the family physicians, and the middle and lower classes getting service at the great hospitals. The American demands the individual family physician service. We should give it to them and the way to do this universally will be to restore our four-year course for the average every day physician and let the out-standing man take 10 years if he wants to.

———R———

Correct Dose Measurements of Radiation to Malignancies

OPIE W. SWOPE, M.D., Wichita

Read at the Annual Meeting of the Kansas Medical Society at Topeka, May 6-7, 1925.

In coming before you with this subject I hope I am not too presumptuous in the fact that while x-ray is an old subject, and many of the minor details are well known to the medical profession in general, many are yet, however, in doubt as to the methods of application of x-ray as a therapeutic agent to many and varied pathological lesions, especially superficial and deep-seated malignancies.

There is abundant evidence at hand, clinically and experimentally, that a definite amount of radiation exerts a definite influence, biological as well as pathological upon cancer cells. Experiments reported two years ago at the American Association for Cancer Research upon the influence of tumor growth in animals by means of radiated tumor emulsion proved that an emulsion of Flexner-Jobling Rat Tumor, which was radiated with one or two skin erythema doses, failed to show upon re-inoculation, while in the control animals which were inoculated with the same emulsion unradiated, the tumor grew in thirty-four out of forty-three inoculations.

For the physician of the medical profession to obtain a fair knowledge and become successful as a doctor, it is first essential that he be well endowed with knowledge as to diagnosis and therapy of the many ailments to which the human race is heir.

It is also especially befitting and necessary that he, though he be not a specialist, familiarize himself with the various and numerous special lines of medicine and at least where his broad knowledge fails to reveal the proper result and correct diagnosis to be sufficiently posted that he knows with what specialist to consult.

Radiation therapy and radiation diagnosis, likewise, have become one of the most valuable assets, not only to the general practitioner but to each and every specialist in most every line in making his diagnosis and rendering in many cases the proper therapeutic measures.

The rapid advancement in the treatment of malignancies in the last four years by radiation is very well known, and it is also well known that within that four years surgery does not hold the most important and highest esteem in effecting relief and cures in malignancies, although in the past it has held sway over all other measures. The present indications are that surgery in malignancies is being displaced by more essential methods.

Radiologists and surgeons have now become trained to think with the pathologist and internist of the necessity of co-operation of all of the forces in the treatment of these lesions, and by so doing the progress of malignant therapy by radiation plus surgery, radium and all the other valuable forces has so rapidly advanced within the past four years that a discussion of its advancement is not necessary at this time.

The principal point I wish to bring out is the method by which the x-ray dosage to a certain part is computed, by which the best biological result in the organism is obtained.

We shall, therefore, consider more in detail short wave therapy or so-called deep roentgentherapy and our latitude of control over its application, either alone or in combination with radium to a given depth and to a given part, and also of the longer waves of x-ray, or the soft rays as mostly used in superficial therapy.

In so doing, the factors necessary to produce the desired dose of radiation must be considered and they are, first, sufficient voltage at the terminals of an x-ray tube to produce very short wave lengths, or as it were, hard rays, as they are the rays which reach deep into the tissue and scatter

secondary radiation where they stop and between the portals of entry.

Since radio sensitiveness is influenced by the vascularity of the tissue under treatment and further by the character of the type of cell composition of the tumor under radiation, and the normal cell behavior is according to or dependent upon the functional, structural and chemical characteristics, one can readily comprehend why such tissue as cartilaginous, testicular, tonsillar, thyroid and endothelial, etc., require a wide field of variation of dosage.

The more intense the voltage produced by the x-ray machine, the greater the depth penetration between the point of entrance of the beam of x-ray and the point of exit, and since it is between these points that the portion of the body receives the secondary radiation—and it is the secondary rays that produce the biological reaction—we are able to calculate a lethal dose by present methods. Thus you see many factors enter into the calculation of the correct dose to be given.

The very hard direct rays which go on through the body are inert as they leave no secondary rays in the tissue, therefore, do no harm nor good.

A great many of these factors can be calculated by the rules of the inverse square law but there are certain factors which cannot be computed by the inverse square law regardless of the flexibility of technique employed.

We have stated the more intense the voltage applied to the tube the greater the depth of penetration. We then must consider the distance, the voltage applied, the milliamperes or quantity used, the filters interposed between tube and patient and the time required to deliver a certain dose at a calculated depth. Then we must know with all of these factors and their various flexibilities the time that would be required to produce an erythema dose (skin unit dose) to the skin or as it were a tanning of the skin. With the knowledge of how to produce this effect in any given case, with the inverse square law it is fairly easy to calculate the amount of radiation required to produce this skin effect. Regardless of distance, voltage, milliamperes or time, these can all be calculated.

For a time it was thought the percentage of skin dose to a certain depth might also be calculated in this manner, but we have found by experience with an accurate method of measurement quite the contrary.

Having in mind all of these factors we must calculate the variation as applicable to various wave lengths into radio-active substance sufficient to produce at a certain depth or source sufficient direct radiation within or about the part from which eminates the many thousand secondary rays to get the therapeutic result. This can now be done in a manner similar to the administration of a drug. We do not administer the highest possible dose the system can stand of an anti-toxin when immunization is the result desired; if we have a diphtheritic case of severe type the anti-toxin is administered for its highest potency. I dare say many of you have and do today administer salvarsan and its derivatives according to your analysis of the disease being treated. I am sure you do not always administed the big knock-out or .9 gram dose in all cases.

Thus arsenical preparations are administered to allied conditions of syphilis as per our best judgment; so it is with radiation.

The past has proved many valuable assets for our future radiation therapy according to the type and cell characteristic of the condition being treated. In order to do this accurately, we must know our x-ray machine's eccentricities and the actual x-ray output.

We now revert to the previously stated factors necessary for actual dose calculations which are:

1. Voltage.
2. Tube distance.
3. Milliamperes or quantity.
4. Filters.
5. Size of portal of entrance.

Voltage changes are very common according to atmospheric pressure, altitude, city current fluctuations, etc. Therefore, with our kilovoltage yesterday we delivered a certain percentage of depth dose; today it may be from two to five per cent different, greater or less.

The distance factor we can easily keep constant and if we do not a slight difference in distance makes a very great difference in the percentage of skin dose being sought. An example of this—at 60 centimeters distance to produce a certain dose would require a very great difference in time should we treat at a hundred centimeters distance. The inverse square law is here applicable.

Milliamperes, or quantity going through tube, likewise means a very great difference in time if they are changed: e. g., if we

have a specified time to produce a dose all other factors being constant, with five milliamperes we would have to double the time to reach this required dose should we use two and one-half milliamperes.

Filters are the most important of all things to bear in mind for it is with this part of the procedure that we entirely control the possibilities of an x-ray burn. The filter mostly used, especially in America, for deep therapy now is copper. If we use a half millimeter copper we get a larger bundle of rays to the skin in a shorter time than we do if we use one millimeter copper. With one-fourth millimeter of copper with the same voltage and other factors remaining constant, we would produce a bad skin burn before a ten centimeter sufficient depth dose had been reached; thus the heavier the filter the greater the percentage that reaches the desired depth until the most effective wave length is reached.

With our apparatus we find by actual experimental measurements the highest efficiency of wave length is obtained with one-half millimeter of copper interposed. If, therefore, we use three-fourths or one millimeter of copper as has been the custom in the past, and is yet used by many, we only increase the time required to give the necessary skin unit dose. If we desire to treat a lesion which is less than ten centimeters depth, it is necessary only to use one-fourth millimeter copper and the effective dose can be administered in a shorter time.

The portal of entrance also has a very great significance. We have spoken of secondary radiation as being the principle which produces the biological reaction. Then if we use a small portal of entry we do not get the same amount of secondary radiation as we get in using a larger portal of entry. In treating an area where metastasis is suspected we would use a large portal of entry in order to obtain a large homogenous radiation.

We will now refer to the essential principle of radium application and why in a great many cases the combination of x-ray, radium and surgery should be instituted.

We have spoken of depth dose. We usually calculate the pelvis to be twenty centimeters antero-posterior to postero-anterior, and we are treating a cervical carcinoma; now, what part does each play in effecting a cure of this patient?

We will assume that this is a very early carcinoma, in fact, so early that we are not sure it is a carcinoma; however, we must consider it bad practice to do biopsy to find out. We would rationally co-operate and treat the patient with intensive high voltage, correctly measured dose x-radiation through a large portal of entry in order to get a homogenous radiation; and to be doubly sure if at all consistent, insert radium directly into the lesion and not use such heavy doses as have been the custom in the past. You ask, why? For the simple reason that in producing this x-ray dose deep into the tissue we have utilized already the very hard and most essential rays.

Radium we know dissipates itself very rapidly in contact with tissue but there are essential rays with radium; in fact, they are not rays at all but particles, or so-called beta and alpha rays, all very soft rays which we have been unable to utilize with x-rays and it is very essential that we have some of these rays. Thus, we use radium direct into the lesion where it is possible to do so. Especially is this method desired in uterine, rectal and gastric carcinoma.

After this procedure, if this be an operable case, two or three weeks gives the surgeon a very much greater opportunity to operate without having a recurrence. Whereas, had surgery been instituted primarily the possibilities for recurrence are well known. Had radium therapy alone been instituted the cervical lesion would improve but a marked stimulation of the distal lymphatic involvement would be brought about and a recurrence is sure. With x-rays and radium applied the cell multiplicity is at least stopped and surgical intervention is made quite safe.

If this be a case of advanced carcinoma or even readily diagnosable it is then inoperable and radiation by x-ray and radium should be instituted primarily, and even in this case we may make of it an operable case.

So after all by working hand in hand we are nearing the climax where each and every available method considered of scientific good and by close co-operation of the surgeon, pathologist, radiologist and every other specialist, we will no doubt over a period of five or six years marvel at the cures of superficial and deep seated malignancies.

I have tried to interpret this procedure of radiation to you in a simple manner that you may readily understand the importance of roentgenology and its application being conducted as scientifically with all of the painstaking efforts and care and

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responsibility, as you as specialists or general practitioners assume when you undertake the arduous duty of delivering the best there is in you to your patient, and when the best has been done and your conscience clear and your patient passes on as many of them do through the roentgen laboratory, you will not lose sleep over worry.

By a few lantern slides I shall attempt to demonstrate how dose accuracy can be attained by the use of the iontoquantimeter. This instrument is standardized by electroscopic measurements. It has an ionization chamber consisting of sulphur or amber at each end of the cable. One end of the ionization chamber is attached to the meter and the other end is inserted into a paraffin block which has the same absorbing power of radiation as does the body. If we desire to use on the patient, the rectum, vagina or other oroficial cavity may be used.

The paraffin block has accurately measured distances and variations in depth do not change, therefore in seeking the voltage and x-ray output each day before starting a series of treatments one can know accurately what he is doing and detect errors that might be in the neglect to insert a filter or something that might terminate in a bad accident.

When the ratio of the surface dose and depth dose is taken, we therefore know how long a time it will require with chosen factors to produce the desired radiation at a given depth.

We will assume that half the time is consumed in the discharge of the iontoquantimeter at the surface as is required at ten centimeters depth; we see immediately that fifty per cent of the surface dose is reaching the lesion which we estimate to be ten centimeters deep. If this be a twenty centimeter patient, we can also determine readily the quantity passing through to the opposite side. Knowing our limit surface dose when we treat in an opposite direction we know where to stop.

If the patient be unusually large we enter through the perineum and sides until a known quantity is delivered within and about the lesion sufficient to destroy or probably increase the lymphocytic element to a higher resistance, accordingly, as the case may be.

Referring to what is meant by an erythema dose which has been spoken of. It merely means the quantity of x-ray absorption per cubic centimeter square of tissue to produce a maximum saturation without injury to the healthy tissue. Then if 100 electrostatic units at the surface are sufficient to produce a mild erythema and a mild erythema is a sufficient quantity of radiation to produce destruction to cells forming the lesion, we can produce a similar effect at any given point in the body.

—B—

Kidney Function

H. E. McCARTHY, M.D., Kansas City, Kan.

Read at the Annual Meeting of the Kansas Medical Society at Topeka, May 6-7, 1925.

The author in his handling of the subject, which he considers opportune because so little used, although of extreme value both in diagnosis and especially in prognosis, realizes that he cannot take up the individual technique of each test nor its applications in different medical as well as surgical aspects. The scope of this paper will apply to urologic conditions in particular and to the mention of other conditions in which the tests are of value.

Preoperative information on kidney function by the various pigment tests and by blood chemistry, should be secured in all surgical conditions of the prostrate, bladder, kidney, and even long standing strictures with more or less complete retention.

Normally both kidneys function identically, therefore a discrepancy in function indicates the probability of a disease of that kidney. In testing the function it depends on the type of test made, also the pathology expected, and the author believes that in no surgical case should dependence be placed on any one test to the exclusion of others. In the prostatic conditions one should perform the indigocarmin test for time relationship of kidney function and then the phthalein test. If the phthalein test gives a test sufficient it may be recognized, but in our experience there are a number of cases giving a low phthalein output that are good operative risks in accordance with their blood chemistry, therefore we favor doing one of the blood chemistry tests in addition.

In pathology in the kidney, such as stone, pyonephrosis, hydronephrosis, polycystic kidney, etc., it is necessary to separate the two urines and obtain from each side for examination. The use of the ureteral catheter demands accuracy and care also; it is well to obtain, at the same time, a collection of urine for the bacteriological and chemical tests, then removing the cystoscope and performing the pigment test desired. In making these tests the amount

of urine obtained is of no particular diagnostic value. The catheter should be carefully placed in the pelvis with as little trauma as possible as an anuria is liable to result with careless handling.

Robt. V. Day, in the *Journal of Urology*, January, 1925, suggests for the male a method of collecting bladder leakage of phthalein during the process of ureteral catheterization for kidney studies. The author has employed this method for some time but to Dr. Day, who has written, shall go the credit. We shall quote: "Remove the telescope leaving the sheath and catheters in, then insert a silk web catheter No. 10 through the sheath after cutting off the funnel end. After the third catheter has been passed thread the three through the sheath and remove the sheath. In this way we are able to estimate the leakage simultaneous with the excretion of phthalein from two sides. In the female this is not necessary as the catheter can be readily passed alongside the two ureteral catheters."

In testing renal function in tuberculosis of the kidney great care should be used. It is essential not to exhaust the patient by too long instrumentation nor cause injury by allowing the catheter to remain, in which event we may cause a hyperemia and edematous swelling of the ureteral mucosa with more injury to the kidney and possibly sloughing of the ureteral epithelium and subsequent infection. Methods of examination should be performed which do not take more than three-quarters of an hour. Such methods include cryoscopy and comparative urea determination.

In cryoscopy, a kidney that does not present a concentration of less than one degree C. is usually diseased, those presenting a concentration below two degrees C. are usually functionally efficient. Cryoscopy of the blood also furnishes approximate data as to renal function. The freezing point of normal blood is 0.55 degrees C. to 0.57 degrees C. or lower.

We will now mention in slight detail the most used tests; Phthalein test—The test is made by the intramuscular injection of 1 c.c. of the dye, and colorimeter comparison made of the output in the first and second hour. The normal output is taken as sixty to eighty-five per cent; although authors vary from fifty to ninety-five per cent. The repeating of the test at varying intervals gives a relative idea of improvement.

Urea concentration test was first introduced by McLean and DeWesselow and they consider that in the majority of cases, it gives more reliable information than any other. McLean considers that it will detect a lesion of much slighter degree than can be done by estimating the blood urea. The rationale of the test is that after the injection of urea the blood urea rises, and if the kidneys are healthy, a high concentration of the urine excreted in the first two hours afterwards results. If, after the injection of fifteen to twenty grammes of urea, the urine of the second hour gives a concentration of over two per cent, the kidneys are held to be fairly efficient and the higher the concentration the more effective the kidney function. Urea sometimes causes diuresis in the first or second hours and thus a vitiation of the test, and under these circumstances the period of observation is lengthened to three hours. If, however, the urea is given in the morning when no fluid has been taken it is seldom that a diuresis occurs. It is always well to do a blood urea before one tries the urea concentration because in nephritis one may find two patients with a urea concentration of two per cent and one will show a blood urea of 200 mg. and the other 30 mg. per 100 c.c. giving a head in one case of 170 mg.

Blood Urea—Although no one believes that it is the retention of urea which is responsible for the toxic symptoms in nephritis, there is no doubt that in diseases accompanied by impairment of the renal function the urea content of the blood has a tendency to rise apparently due to non excretion, a fact stated by Christinson in 1829 and looked upon as evidence of renal disease. This is an important deciding factor in the excretion of urea, the amount depending on the ingestion of protein. The urea content of the blood in health generally is considered to lie between 20 and 40 mgs. per 100 c.c., some writers state from 15 to 50 mgs. as normal.

Our Dr. Ralph H. Major of K. U., in *Arch. Int. Med.* of January, 1924, gives his creatinin test for renal function in which he points out, that, while normal kidneys respond promptly to an excess of creatinin in the circulation by a greatly increased urinary output of creatinin, the kidneys in a chronic nephritis show no such marked output and at times show even a decrease. In his study the patient's urine is collected for a one hour period and then 0.5 gms. of creatinin is given intravenously. Subsequent collections are made at one and

two hours respectively and the total secretion of creatinin in each of these specimens is compared with that before the injection. The author has made quite an exhaustive study as his complete article will show. His estimations are made by the Folin method. The normal kidney was found to respond to the intravenous injection of creatinin by an increased output averaging three times that excreted during the same period of time. The creatinin test has proved to be a good kidney function index in disease.

Edwin Becher in November, 1924, gives a xanthoprotein reaction which is more to be commented on for its simplicity than accuracy.

The determination of the freezing point or cryoscopy is valuable. Differences between two kidneys indicate pathological changes; however, the kidney presenting the lower concentration is not always the diseased one as the increased fluid secretion may obscure the true conditions.

The indigocarmin test is the most simple and reliable dye test. Delayed excretion of the dye indicates functional disturbance and disease; a diseased kidney if it is not functionally disturbed is capable of excreting the indigo more or less normally. Cromo cystoscopy is of value in recognizing the ureter-ostia of the bladder and for the determination for the renal function in general.

The phthalein test is a test for the total function but we consider that by itself it is not reliable.

The presence of calculi disturbs renal function except in cases of small calculi in the pelvis, not obstructing. These can be suspected by the findings of blood and pus and confirmed by roentgenographic examination.

The degree of urinary retention in the pelvis of the kidney, or hydro-nephrosis may be determined by estimation of residual urine in the pelvis as demonstrated by catheterization and pyelography. The functional diagnosis is important in determining the operative indications.

The diagnosis of renal tumor must be based on a combination of subjective and objective symptoms, pain in kidney, palpation finding, hematuria and functional disturbance; this latter depends less upon the size of the tumor than upon its location (that is if obstructive) and upon toxic influences. Renal tumors must be differentiated from hemorrhages affecting other organs. Normal bleeding kidneys are distinguished by their normal function. Cystic renal tumors are rarely unilateral. Bilateral cystic tumors of the kidneys are generally wasted, excrete indigo carmin slowly and may be hemorrhagic. The functional tests will differentiate between renal tumors and growths of other abdominal organs.

Pyelitis does not affect the functional findings. Pyelonephritis results in a marked functional derangement.

The kidney functional test and blood chemistry are probably our most valuable agents today for not only aid in diagnosis but also for prognosis and the progress.

In gout which is characterized by its high uric acid content 4 to 10 mg.

In Diabetes with its carbondioxide and blood sugar determination.

In infantile tetany which shows from 3.5 to 7.0 mg. of calcium instead of the normal 9 to 11 mg. per 100 c.c.

In rickets the inorganic phosphorus of the serum is reduced to 3.7 to 2.0 mg. instead of the 5.0 mg. per 100 c.c.

With just mention of these to call to mind the numerous possibilities of laboratory usage, in our diagnosis, treatment and prognosis, we wish to stress the fact that kidney function and blood chemistry are not for the urologist and laboratory technician alone, but if looked up and their value to you understood a great amount of good will result to your patient as well as to yourself. Particularly in the aged, it matters not the type of operation, should the kidney function of the individual be understood. I have tried to make this paper as practical as possible and wish to apologize if it appears too much in terms of urology. It does belong there but not exclusively and I, as the rest of you, only speak in the tongue with which I am most familiar.

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The School Child and Heart Strain

MABELLE TRUE, M.D.,

Child Health Adviser, Kansas State Tuberculosis Association.

Read before the Kansas State Medical Women's Association, Topeka, May 7, 1925.

Mothers, teachers, nurses and all those having to do with the training of children are now concerned earnestly with the problems of bringing them up to a healthy childhood. Their concern is much greater than their knowledge in most cases. They need and seek the help of a professional medical adviser. This service the Kansas State Tuberculosis Association has been offering through its Child Health Adviser throughout the state of Kansas for two years past.

It was our intention to give special attention to problems of nutrition on the supposition that the malnourished child is most likely to be the tuberculous child but we soon found that malnutrition (or underweight which is the basis of the usual malnutrition diagnosis) does not cover the entire field of ill health in childhood.

Any child whose health was a matter of concern to teacher or parent might be brought in for consultation for examination and for suggestions as to the improvement of the situation. To go back of the symptoms described, to try to discover the contributing factors, to bring parents to recognize the true condition and to persuade them to attempt to remove the cause of the child's ill health by changes in diet or home habits and to seek suitable medical treatment—these were the things we wished to accomplish.

The cardiac conditions encountered were a source of much perplexity to the examiner, but the conviction grows that the heart troubles of children should have more consideration than they now receive from the home, the school or the family doctor.

A heart murmur congenital or acquired, may not be discovered by the doctor until he makes an examination during illness, then it is announced to the family and they have the shadow of death over them in the fear of the mysterious heart leakage which they think that murmur signifies.

A high school girl asked, piteously: "I heard the doctor tell my mother one time I had a mitral. What is a mitral and what will it do to me?"

We probably have cardiacs in Kansas schools in about the proportion found in New York City, where a cardiac survey of school children was carried on through four years. Fourteen children to the thousand had some heart murmur but only half of these had organic defect and hardly two of the fourteen had any limitation of activity.

When cardiac trouble is recognized in a child the doctor is consulted if he presents any sort of symptoms; and the care given is mostly satisfactory, though the tendency is to restrict needlessly, and to develop a habit of invalidism in a child who has, at any time, had any heart murmur. Because a heart is weak after "flu" or diphtheria, the doctor has not been careful to impress the family with the probability of full recovery after a few weeks rest has allowed the heart to regain its tone, and there is needless anxiety over the patient for months after the heart has fully recovered.

In our work in the clinic—as we called these health conferences—the many "queer acting" hearts we found gave rise to some question as to our responsibility. Almost daily we found one or more children with heart irregular or rapid above any normal rate. Any hint of heart trouble so alarmed the family, the doctor was so inclined to take as a matter of course any heart without a murmur, it was a question if these irregular or rapid hearts should be considered as defective. What was likely to be the future behavior of these hearts under the strain of school life?

In making a study of some underweight school children with the nurse in Atchison, we found 52 of the 139 children examined to have some cardiac peculiarity. Of the eight children with murmurs only one child was inconvenienced and she should have been in bed. In the other seven with murmurs no limitation of activity had been noted. A few of the hearts showed the irregular beat but most of these 52 cardiacs showed only the rapid pulse.

The irregularity gave the child no inconvenience; he never seemed conscious of it. It could best be detected by listening to the heart and noting the beat in ten second counts through the full minute. The irregularity becomes more marked with deep breathing, less marked with exercise.

Osborne says that a recent study of children's pulse rythm shows that not 40 per cent of children's hearts are regular and 60 per cent vary from mild to extreme irregularity. Any child even in normal health may, when asleep, show notable pulse irregularity.

Sir James McKenzie studied one thousand patients with heart irregularity, following the cases for many years and by careful observation he defined two classes, the youthful type and the adult type of irregularity. The "sinus arrhythmia" of the youthful heart "shows that the cardiac muscle is fresh, healthy and responsive to the stimulation produced by deep breathing."

After a febrile attack, when the heart rate drops and the irregularity appears, he considers it a sign that the heart muscle has escaped damage. He says he has "watched many such cases through many years. The young men led active, even athletic lives, the young women married and bore repeated pregnancies without any failure of heart function."

So we are justified in concluding that a child with no other trouble than a heart irregularity may safely be passed over as needing no special attention, and probably it is unwise to alarm the family by making mention of it as "skipped beats" cannot be explained to an anxious parent as a matter of small moment.

The overacting heart seems quite another matter. Granted that the child heart beats faster than the adult (Osborne says that for children under ten or twelve anything under 80 is unusual, anything up to 100 is normal) granted that the excitement of the examinations raises the heart rate somewhat; still we found so many children whose heart beat was 120 even up to 150 a minute that we wanted to know the reason for this.

Only two such children when asked as to heart symptoms gave any history of dyspnea, though one little chap sighed "Gee! I ain't got no wind at all anymore," but the "stitch in the side" was a fairly common complaint. Mothers had noted it as coming on after exertion but because it was felt under the left arm or over the spleen they did not consider it a heart pain and so were not anxious about it. The pains around the heart, complained of by some of the children more often seemed connected with digestive disturbances rather than exertion.

The child's "stitch in the side" Bishop identifies with the "praecordial pain" noted by Sir James MacKenzie and described by Lewis as a feature of the "effort syndrome." MacKenzie says that in heart impairment dyspnea and pain are interchangeable symptoms; that sometimes activity is limited by the pain, sometimes by shortness of breath. That being true, the child's complaint of "stitch in the side" should never be considered unimportant.

These children with rapid hearts were likely to be found fatigued to the point where they did poorly in their school work: but thirty, forty or fifty extra beats per minute on the theory that each beat lifts the equivalent of three to five pounds a foot high, means the expenditure of a large amount of energy and might explain the fatigue, though the toxin from some infective focus circulating in the blood is a more generally accepted explanation.

So many of these children with rapid hearts were observed to have bad tonsils, and also had "growing pains," if not more marked rheumatic symptoms, that we wondered if the heart disturbance might not be a prechoreic symptom due to nerve irritation from the tonsil poison, and we noted the rapid heart as another evidence of the advisability of tonsil removal. I had the chance to see two such children again, a few weeks after their tonsils were out. A boy of 13 who had been brought to the clinic because of underweight and mental dullness was improved in health, in weight and in school work and his heart rate had dropped from 120 to 90. The little girl of five extremely underweight, who had been a nuisance in school because of her constant weeping was becoming plump, rosy and cheerful, and her heart rate was 100 instead of 140.

MacKenzie writes of the poisoned heart with rapid beat, and such heart rate is not now considered a purely nervous manifestation, but is due to loss of tone and contracting force in the heart.

Doctor Bishop, in his effort to make clear the modern conception of cardiac treatment, makes use of an expression "softening of the heart," which would be as alarming to the public as the much dreaded "heart leakage," if the term came into general use. A "functional softening" comes from poisons circulating in the blood which depress the tone of the heart muscle, as they may depress the tone of the trunk muscles so as to allow a slump in posture.

Also he describes the organic softening

following influenza or diphtheria when the heart muscle itself is the seat of some inflammation. This inflammation is likely to recover in time and the heart resume its tone, but poisons constantly absorbable into the blood stream keep the heart soft and flabby.

Lewis in his study of what he calls the "effort syndrome" in soldiers classifies the cases by cause into six groups.

1. The smallest group, with incipient heart disease.
2. Soldiers gassed.
3. Incipient tuberculosis, local pus infections and gastro intestinal troubles.
4. Delayed convalescence from acute infectious illness.
5. A large group played out by exposure, hard work, and disturbed sleep.
6. The largest group of all who have constitutional weaknesses, nervous or physical or both; incomplete or imperfect development, as flat chest; infantilism; nervous taint, as epilepsy or insanity; those who as children were nervous or bed wetters, etc.

If these conditions leading up to the "effort syndrome" were found in young adults entering army life, it would seem wise to be on the lookout for them ten or fifteen years earlier in life and to study the effect of strain on the heart of the school child to judge how well he is able to meet it.

There are many hearts that might be classified as "Potential Cardiacs," in risk of damage by some constant or recurrent infection; as constant infections may be considered diseased tonsils or sinuses, running ears or abscessed teeth whose poisons are absorbable into the blood stream.

Doctor Bishop speaks of the softening of the heart by poisons absorbed from the intestine when putrefaction is present. We distinguish as does Hill in Practical Infant Feeding between putrefaction of proteins and fermentation of carbohydrates and observe that in children the carbohydrate digestion is more commonly at fault. Poorly cooked starch or a high sugar ration which ferments in the small intestine give a child most frequent difficulty.

Osborne says that "anything which tends to increase the acidity of the tissues and diminish the alkalinity of the blood seems to produce endocardial and myocardial irritation if not actual inflammation." He states this as an argument for the alkaline treatment of rheumatic fever and we may consider it as going to show why cardiac children do better when candy is restricted —and also that an over amount of sugar, which is a common fault in children's diet may account for the rapid heart beat of some of them. This would be as true of excess proteins as meat and eggs which is a similarly irritating factor, but this faulty diet is not so prevalent among children as is the excess of carbohydrate.

Sutherland well describes the rapid heart of childhood in his consideration of nervous tachycardia or irritable heart which he says is not uncommon in young subjects quite apart from any cardiac disease.

The tachycardia is persistent, not occasional, and may last for months or years. The rate may be increased by the usual excitants, emotion, exercise, fever or the like, but it slows back to about 120. The recumbent position lowers it only a few beats, and may even increase it, but the rate drops to normal during sleep. The rhythm of the heart is not disturbed. This tachycardia occurs near puberty, especially in neurotics.

While he recognized the latent toxaemia noted by MacKenzie as a cause of this condition he finds children affected who have no discoverable focal infection and they improve on treatment directed toward the nervous system.

Bishop suggests that Graves Disease is not unknown even in childhood and the thyroid should be considered as a factor. But though we have districts in Kansas where goiter is noticeably prevalent I do not think I have noted a probable connection of the goiter with a rapid pulse in any case among children. In some of the cases we saw there was a history of some nervous factors—quarrelsome or poorly regulated home life, the strain of added effort, overwork or social strain beyond the school work.

I remember especially two little girl chums, each anxious to excell in aesthetic dancing much in demand for evening entertainments, underweight and with hearts running above 120. Late social hours, the last show at the movies, or the midnight concert over the radio are all causes for loss of sleep in school children.

As to the frequency of these rapid heart cases, an observation of MacKenzie's gives this hint. In speaking of the poisoned heart he says, "Sensations referred to the circulatory system, palpitation, breathlessness or exhaustion easily provoked, and increased rate, systolic murmur, and dilatation may appear in the heart. In analysis

of four hundred soldier cases, I found 90 per cent of the hearts were not organic; though increased rate and dilatation are present these signs are only part of a general condition."

So we are not far wrong, probably, in suspecting that our proportion of seven children per thousand with organic heart disease is only 10 per cent of the cardiac problem of our schools, and that we have about seventy children in a school system of one thousand pupils whose hearts will bear watching—and who should be tested for the heart's response to exercise.

It would be a good thing if school physicians and nurses, physical directors and teachers would follow Lewis' work on "The Soldier's Heart and the Effort Syndrome," and apply his teachings to their pupils in recognizing some "potential cardiacs," for the flabby heart muscle and enforced exertion, even in recreation, is a combination that holds possibilities of disaster.

The little child will govern his periods of play and pause and seldom is inconvenienced by the activity of his daily program especially if the afternoon nap or rest is insisted upon. A child may come to evening too tired to eat supper or to sleep well, if so he has played too hard and should have quieter amusements for some part of the day.

The school child is anxious to keep up with the "big boys" or girls, but left to his own devices he will rest long enough to catch his breath when his "wind gives out."

Supervised recreation, the substitution of calisthenics and group games for free play at recess has the supposed advantage of securing for every child a specified amount of exercise—a disadvantage unless the child is free to drop out of the game when he notes any discomfort.

The new planning of our schools on the "6-3-3" arrangement, six years in the grade or elementary school, three years in Junior High schools, three years in Senior High school, has advantages from the educational point of view, no doubt, or it would not be so generally adopted.

But in a small town school system, it puts the child of twelve or thirteen at seventh grade into the high school building and under the high school program of study and athletics.

The coach or physical director is young, enthusiastic and his program is popular. He has had his training under college conditions in a class of college students who are older, more nearly full grown physically and mentally, so he fails to consider that athletics should be modified for pupils in the early teens, because at this period of rapid development the heart is already on strain trying to adjust itself to meet the demands of the growing body.

Tait McKenzie of the University of Pennsylvania lists athletic and gymnastic games according to their demand on nerves, heart, lungs and muscle and finds that the ones most used in High School athletics, football, basket ball and track work, are the ones that make the most severe tests and the students, once in the game, must play it through, or win the penalty of the scorn of his school mates.

McKenzie says, "There is always danger of exhaustion and overstrain from excessive athletic competition, but early adolescence and middle life are the danger periods. The heart of the boy of fifteen is in no condition to stand extreme tests. About this time a lad's ambition is apt to outstrip his vitality."

Doctor Morse in Hygeia for May, 1924, says of "The Overstrained Child" much the same thing of school athletics but carries his warning beyond the activities of school life to the Boy Scouts or the summer camp, where all are out for the same hikes and stunts, and no physical examinations are made to determine relative ability; and it frequently takes children until Christmas time to recover from summer camp.

In a safe and suitable summer camp for boys and girls the rest periods should be as thoroughly planned and supervised as are the exercise stunts, and this is emphatically true where the camp is set up as a nutrition project for underweight children.

It is the custom in some of our rural schools to train intensively for a few weeks in the spring for a county or township track meet with running, jumping, and other such individual feats. One observant county nurse says she found children in school who had gone into the track meet in April who even the next fall had not recovered from it. They were dull in school, listless, tired out, with no pep, symptoms corresponding to those of "staleness" or chronic fatigue as described by Tait McKenzie.

Some modifications of athletics for girls is usually considered desirable, though we too often find coaches who scorn "girls' rules" for basket ball. The studies of Doctors Clelia Duer Mosher and Angenette Parry, quoted by Tait McKenzie show that

the physiologic limitation of girls is not as great as has been supposed. But Doctor Janet Lane-Claypon says of exercise for adolescent girls, "The onset of puberty is often a period when, without showing signs of actual disturbance, the tone of the body is not good. Many girls are anaemic and the muscles are flabby with a good deal of superfluous fat. This is not caused by diet but by a general state of the organism. Over-fatigue should be avoidable until the body has reached a more stable condition."

Standards of health inspection in force in one state allow no participation in competitive athletics and restrict physical education for pupils 10 per cent or more underweight; so in the early teens athletics should be guarded more according to age and weight-height ration than by reason of sex.

The clinic visited a town where attention was forced on high school athletics by the alarming collapse of one of the players at a basket ball tournament. The school nurse had the idea of "examining" the high school students but that was not practicable in one afternoon. She did call the seventh grade Junior high school boys from their gymnasium practice. They came by groups, sat resting five or ten minutes before the examiner reached them, yet their hearts were tumultuous, rapid, and evidently under strain. A group of boys from the upper classes of Senior high school, four or five years older showed only two or three with rapid hearts.

Terman says "The child's heart compared with his arteries is small and must beat with great rapidity to maintain the normal pressure of the blood. The adult ratio between heart and arteries is not attained until the later years of adolescence, previous to which time all exercises and games making heavy demands on strength and endurance are dangerous."

There is added danger when the adolescent boy or girl shows phenomenal growth in height or "shoots up over night" as we say. There is a sudden increase in the circulatory area, and the heart is under extra strain to meet the ordinary demands upon it. The pupil of this type who undertakes any athletics during this period of rapid growth should certainly be under constant supervision.

Less, rather than more exercise, would prove the safer measure of activity for those children during the rapid growth period, and they should be watched for any evidences of persistent fatigue. The modified school program—such as is adopted for the "Open Air Schools" allowing one or two rest periods during the day, should be more generally available for such pupils.

It is unfortunate that so much of our school health service is discontinued when the child reaches high school. Not only the nurse's annual inspection, but frequent careful examinations, especially exercise tests for children beginning a strenuous program of physical education, might recognize some hearts that are being strained beyond the limit of safety. When it is the custom, as in most schools, to select one or more teams and let them bear the brunt of school athletics, it would seem that competent physical supervision might be secured for their limited number. Much would be gained if the physical director would admit that a young heart may be overstrained, if he would call upon an advisory physician to be on the lookout for those cases that show early or lasting heart effects, and would plan a modified program for them. And this lookout should continue all through the school life.

Williams in "Personal Hygiene Applied" suggests a danger that may arise even after the High School student becomes adapted to the demands of his athletic program.

For years it was thought that athletics injured the heart because of the strain on the circulation. Most workers are saying today that the heart is not injured by the performance of athletics unless there exists at the time of contest an infection. He refers to Sir James MacKenzie's work on the "poisoned heart" and continues, "If the tonsils or teeth are infected or if a focus of infection is present any where in the body vigorous exercise is not desirable. One who has a normal heart may engage freely in exercise if the body is free from infection."

A heavy cold, often called "flu," may weaken the heart so sudden strain brings collapse. A high school senior, trained for track and basket ball, played a match game just after a so-called "flu attack," and spent fifteen months, the first six of them mostly in bed, recovering from the acute dilatation of the heart resulting from the strain on the weakened muscle.

Athletic strain at times is terrific. Tait McKenzie tells of a trained Indian runner whose pulse rose after a 220 yard dash from 84 to 168 beats per minute and did not return to normal for thirty minutes. The

normal heart should return to its pre-exercise rate with two minutes rest.

Dilatation may be induced in any heart where the muscle is deficient in contracting power or "tone." Doctor S. Calvin Smith calls attention to the value of measuring the size of the heart before and after exercise, marking the position of the left border on a line drawn from sternum through the fifth interspace. The healthy heart becomes smaller with exertion, but many hearts after exercise show the left border moved outward and the apex beat displaced.

Doctor Sutherland cites two such cases, a nervous girl and a rheumatic boy, where the tendency to dilatation persisted long after the general health had greatly improved.

This dilatation stretches the heart wall so the valve may not quite close and there is a relative mitral insufficiency with systolic murmur at apex. Some of the so-called functional murmurs are due to temporary dilatation of the heart.

Dilatation often repeated produces hypertrophy and as Sir James MacKenzie says, "a hypertrophied heart is always in impaired heart and, however complete the compensating hypertrophy may be, there will always be a limitation in the field of response." This possibility of dilatation of the heart is not a mere fancy. Tait McKenzie quotes the experience of a group of English school boys. There were forty of them, seven to fourteen years of age, out on a week's holiday. They did long walks, did hill climbing (more being permitted the older boys) and gave other time to football and the like games. They led such active lives that the eight hours for sleep was decidedly insufficient. Five days after their return, twenty out of thirty-three showed cardiac enlargement of various grades. This was to be expected but after two and a half months ten of the boys, nearly all of them the younger ones, still had appreciably dilated hearts. It is clear, he says, that the normal limit of endurance in these boys was surpassed and that their hearts would require one or two years to recover normal relationship to the needs of the circulation.

Since many of the children of school age are "potential cardiacs" with heart muscle weakened by latent or evident infections, showing deficient heart powers by rapid pulse, with or without dyspnea or precordial pain ("Stitch in the side"), since the normal heart has heavy strain during the rapid growth period of adolescence, and the weakened heart is still more endangered, and since in many school systems the beginning of high school life and of extra strenuous athletics comes about this time of adolescence.

It is the duty of the school health service to arrange for some oversight of the high school students, to estimate the endurance of pupils who are under athletic training, and to secure a program of physical education in the junior and senior high schools capable of modification to meet the needs of the individual pupil with at least as much attention to personal development as to competitive athletics.

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Unusual Impacted Fracture of the Neck of the Femur

H. GOODLOE, M.D., Independence.

Read before the Montgomery County Medical Society, Independence, Kan., April 17, 1925.

The patient, E. C. M., white, age 21 years, single, weighing 142 pounds stripped, well developed and well set-up, of athletic type. Occupation, bronco-buster and general hand around barn and premises of a large stock dealer. This patient came under observation July 5th, 1924, complaining of pain in the right hip-joint, stating that it had been paining him for some time and seemed to be gradually growing worse. When asked if he had had an injury, stated that about seven weeks previous he had an injury while working in a sand pit lifting heavy timbers with a crow-bar, that he had felt a sudden sharp pain, so severe that it made him sit down or rather lie down. But the pain did not stop. After a while he regained his feet and worked around for two or three hours before quitting time, favoring his leg all he could. The pain

was so severe that night that it interfered with his sleep. The next morning he was told by his Boss to lay off from his work for a while. From this time on, all heavy work was discontinued. When asked why he did not rest his hip and get a doctor, he answered that he thought that he had just wrenched the joint and that it would be all right in a few days, and besides that he didn't want his associates to think he was a complainer or "whiner" as there was so little evidence of an injury. He did light work around the ranch such as driving to the postoffice after the mail, watering and caring for some of the stock at the barn and doing many odd jobs that kept him busy without too much exertion, ever hopeful that the soreness would disappear. He noticed that his foot turned out when he walked and that he had developed a slight limp. He also noticed that when he walked very much, it caused more pain than when keeping quiet, but that he thought the only way to regain the full use of his hip was to walk all he could and he found that this increased the pain, but endured this pain in the belief it was a benefit, often being so sore that he was unable to sleep at night. He tried riding horseback and found the pain so severe after a few miles that he was forced to descend and walk to get relief, and after several attempts finally gave up riding entirely. Yet the pain continued and about the last of June, he was persuaded to seek medical aid. He went to Wichita where an x-ray was taken and was advised that his trouble was an arthritis of the right hip-joint. He then came home to Independence a day or two later and consulted a local doctor, then an osteopath. He then went to a doctor at Coffeyville where he was examined and another x-ray picture was taken but this skiagram was not a successful one and no diagnosis was made.

History card, July 5th, shows the following:

Family History. Father and mother both alive and healthy, residing on a farm six miles from this city; brothers and sisters healthy. Negative family history of T. B.

Personal History. Had infantile diseases, had typhoid six years ago, no serious injury during childhood or adolescence. No loss of motion or pain in right leg previous to May 17th, when present injury occurred. Before injury on more than one occasion rode horseback in company with his Boss as high as 75 miles in a day.

Symptoms. Both subjective and objective symptoms of pain in the right hip-joint; the body weight on right leg caused slight pain in the right hip-joint. Scoliotic spine well marked. Patient on walking, has a perceptible limp, right foot everted. Measurement, right leg one inch shorter than the left; transverse measurement, the right leg one-half inch shorter than the left; right thigh, one-half inch smaller in circumference than the left. In recumbent position, the right leg rotates markedly outward, everting the foot. The great trochanter above Nelaton's line. Tenderness to pressure around the joint. Limited abduction as well as adduction, a slight roughness on movement elicited on abduction. Percussion jar on right heel caused slight pain in hip-joint.

Urine Examination. Sp. Gr., 1016; acid; Alb., neg.; Sug., neg. Treatment. The leg was put at rest for several days with little or no improvement except there was less pain. X-ray pictures were taken about July the 17th which showed an enormous cell infiltration around the neck and head of the femur. These pictures not being distinctive of fracture, an arthritis or possible sarcoma was considered. A Von Pirquet test was made which was negative; a Wassermann was negative. A focal infection was sought for without results. The leg and hip was put in plaster cast with absolute rest for four weeks and a second picture was taken with much better results for a diagnosis, and shortly after this a third was taken of both hips and pelvis for comparison. The patient can walk but will always have a slight limp. His leg rotates outward and foot everted. As for riding, he will have to give that up forever because of the extremely short neck. Abduction causes a mechanical pressure superiorly of the great trochanter against the ilium when seated in a saddle. The patient at present has no pain or discomfort except just before a storm, then complains of aching pains that are not severe but rather uncomfortable. He has tried to ride horseback several months since treatment, but finds it impossible.

I am reporting this case because of its extreme rarity. I have not, in my limited library, a single case reported where there has been recorded an impacted fracture of this type where the patient continued to walk on it. Several authors state that it might be possible but in every incident recorded it was only a few steps after the fracture that the *inpaction broke up* and the limb became useless. This fracture was

by tortion, the most common method in this type of injury. Fractures of the neck of the femur are very common in elderly people, but uncommon in strong healthy youth. Fractures of the neck of the femur barring war wounds, are as a rule from indirect violence.

Conclusion. With the history of trying to move a 1200 to 1400 pound weight with a crow-bar in a sand pit, where the footing is insecure, and while undergoing such exertion, having a sudden pain in his right hip, without the complete loss of his leg following; and the history of constant pain; with the absence of any focal or general infections, and the x-ray findings; also taking into consideration the confirmation of previous riding and athletic stunts performed, leaves no doubt as to the character of this extremely rare, if not the only impacted fracture of the neck of the femur where the fracture under constant use, *did not break up.*

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UNIVERSITY OF KANSAS CLINICS

Clinical Lectures, March 10, 1925

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Department of Pediatrics

Case 1. *Diagnosis*: Congenital Hypertrophic Pyloric Stenosis.

Baby Middleton, four and one-half weeks of age, breast fed, vomiting all food since two weeks of age. In addition to the vomiting the child has small constipated stools of the hunger type. There has been a marked loss of weight and a peristaltic wave is evident. Barium meals show practically no barium going through in four hours and not over 5 per cent in 24 hours. The tumor can at times be palpated during a wave. The child is being fed for three days on thick gruel without milk and then with some breast milk stirred in 1/1000 grain atropine 15 minutes before each nursing. The child has been toxic and shows the Biot type of pauseful respiration. On March 9th, Dr. Russell Haden gave 150 c.c. of father's citrated blood in the vein at the elbow, with the idea of getting the infant into a better condition before the operation is begun.

Dr. Orr is going to operate now upon the child under a local anesthetic performing the Rammstedt operation which is a modification of the Dufour-Fredet or Weber operation. Strauss has a more complicated modification of a plastic nature in which he removes a portion of the circular muscle of the pylorus. This baby is in fair condition and should make a good recovery especially as the mother still has some milk in her breasts.

Description of the Disease.—Hypertrophic pyloric stenosis was first described in 1777 but during the century which followed little attention was paid to the disease. The clinical symptoms and pathological findings were well described by Hirschsprung in 1888 and by Ibrahim in 1905. Since then the literature has been full of reports and the treatment has been highly developed.

As regards family incidence, usually only one, but two and three and even four cases have been more than once reported as well as both twins.

Boys are affected three times as often as girls.

Age at appearance.—Seventy-five per cent begin in the first three weeks of life, some occurring in prematures and during the first week and some between the third and sixth week, the most common time is the third week.

The peristaltic wave is due to increased stimulation or spasm of the stomach wall and is seen beginning at the cardia below the left costal angle, and passing transversely above the umbilicus to the pyloric end as far as the right mammary line.

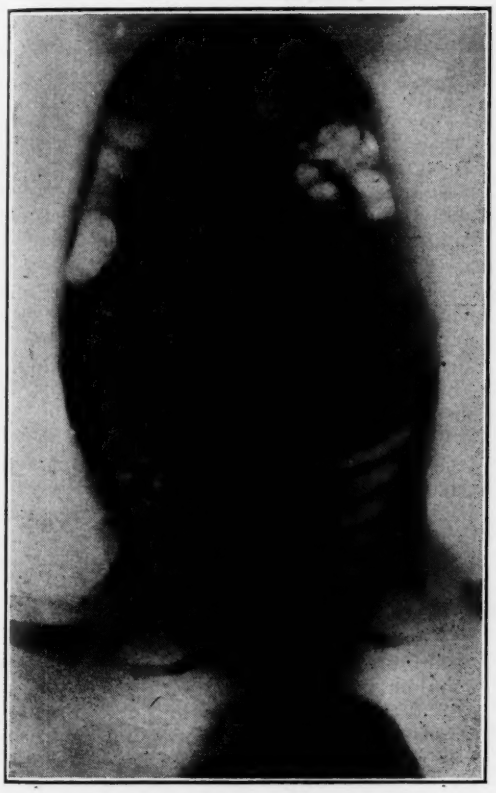
Gastric retention is always present, and when less than 30 per cent of food has gone through the pylorus in four hours, it is advisable to operate.

Prognosis.—The child becomes greatly emaciated and dies from starvation, intoxication or infection such as pneumonia. In cases that recover under medical treatment the hypertrophy (tumor) is persistent for weeks and months. Some infants have a marked tenacity of life and even when apparently in extremis will recover as soon as the operation is over. Such a case was treated by Dr. Orr and me eight years ago.

Treatment.—Medical, atropine solution 1/1000 from one to four drops for its inhibiting effect upon the vagus; thick feeding of cereal such as farina with a spoon. The explanation of success and the retention of thick food has recently been offered by Rogatz, (A. J. D. C., Nov. 1924, also July 1924,) in which he described the *peristolic* function of the stomach. This function is the ability of the stomach to shape itself around the food taken. Obviously this cannot happen when liquids are fed and as a result with hyperperistalsis the liquid and the swallowed air are vomited. Such a stomach filled with fluid is pear or flask-shaped, sometimes oval.

Cream of wheat or farina cooked in water does not liquify as readily in the stomach as when the cereal is cooked in milk. When thick food is fed, there is little air swallowed, the stomach closes around and grasps the thick food, retaining it in the stomach while the air is forced out.

Operative Treatment.—As this child showed no improvement, it is advisable to no longer follow the preceding method of medical treatment, but to proceed with the prompter method, that of operation. As regards the time that one should wait before operating, it is my opinion that a few



Baby M.—Barium-filled stomach showing that nothing is passing the pylorus.

days will suffice to tell whether anything can be expected of nonsurgical treatment. Poynton and Still of London advise operation as soon as the diagnosis is made so that the mother's nursing will be little interrupted. Sauer and many others in this country treat all cases medically as long as the child does well.

As you will see the pylorus in this case is definitely enlarged, olive-shaped and when the muscular coat is divided, the mucous membrane pouts through the incision. Food will now pass through without any interference.

Postoperative Treatment.—Feeding: In one hour after operation this child will be given a teaspoonful of water, at two hours a teaspoonful of breast milk, alternating each hour with the water and increasing the quantity by a teaspoonful until an ounce is fed. At the end of eight hours, the baby will be put to the breast for ten minutes. The body heat is to be maintained by hot water bottles. The atropine will be continued for 24 hours and if vomiting recurs thick feeding will still be used.

March 17th. The progress has been satisfactory, the child having gained 6 ounces in the past week with never a vomiting attack since the operation. The stools are good, the temperature normal. The baby gets only about one ounce from nusing the mother and an additional two ounces from the bottle containing thick cereal-milk-malt sugar cooked together.

March 24th. The wound is well, the vomiting has never recurred and the infant is being taken home today.

It is interesting to know what becomes of the tumor. Martha Wollstein has studied the scar formation after the Fredet-Rammstedt operation and finds that two years afterward only a line marks the wound where the circular muscular fibers have been cut. The tumor is cured in two weeks, and the healing is due to the growth of the serous and submucous layers.*

Case 2. *Diagnosis*: Nutritional Disturbance in a Bottle Baby Cured by the feeding of Lemon Juice Milk.

Another case which is of interest because of previous vomiting and failure to gain is that of this infant, Baby P____, born December 5, 1924, weighing 5 pounds 6 ounces at birth, cesarean section. The mother is a confirmed morphine addict and has had no breast milk. The infant began to vomit his artificial feeding and on the fourth day had lost ten ounces which is a rather large loss for a small baby in the new-born period. Gastric lavage twice a day was used and the baby's vomiting stopped, due furthermore to the use of 1/1000 grain of atropine sulphate before each feeding. The weight had not begun to increase at 16 days, then the formula was changed to:

Whole milk (soured with 30 drops U. S. P. Lactic acid)----------16 ounces

*Wollstein, Martha: A.J.D.C., 23, 511, June 1922.

Boiled water ----------16 ounces
Corn Syrup ---------- 1 ounce

The infant was given 3 ounces of this 7 times a day, taking about 300 calories a day. This caused a consistent gain until the 5th week of life when the weight became stationary.

At this time a more concentrated milk was prepared and soured with lemon juice according to the suggestion of Alfred Hess. The formula:

Boiled whole milk ----------20 ounces
Lemon Juice ----(2½ Drachms) 10. 5 c.c.
50% Corn Syrup solution-------- 2 ounces
Boiled water ---------- 4 ounces

Total food value of this formula 530 calories, 57 cal. per lb. of weight. His weight promptly started up again, the weight curves having been steadily upward. At 2½ months of age the corn syrup was increased to 2½ ounces. The baby weighs 9 lbs. 8 oz. at three months of age, has always had perfectly smooth digested stools, one or two daily, the nutrition is good, the baby is healthy, happy, nurses eagerly all his food. He sleeps well and is never nervous.

At first thought the addition of two-thirds ounce lemon juice to a quart of undiluted milk seems radical, but you will be surprised how pleasant a taste lemon gives to boiled milk especially after the addition of corn syrup. That it has been well-tolerated in this case, there is no denial.

The present vogue of feeding acidified milk is founded upon good theory and successful practice. The theory has been proven by chemical gastric analyses to be correct: the amount of hydrochloric acid secreted by the infant stomach may not be sufficient to neutralize the high amount of buffer salts (calcium caseinate and phosphate) which are present in cow's milk if fed in sufficient concentration to supply the infant's needs. These salts are therefor neutralized before feeding by the souring of the milk whether in the form of buttermilk, lactic acid milk, hydrochloric acid milk, acidophalous milk or vinegar milk (recently suggested but which I have not tried).

The use of lemon juice answers the same purpose of neutralizing the excessive salts in cow's milk as the other varieties of acidification and it has in addition the marked antiscorbutic properties of the lemon. Hess has tried his method in many cases and it proves satisfactory. I would think it advisable to limit its application to normal infants who need artificial feeding until one can get an idea of the results in a large series of cases. The milk may be diluted with boiled water, with cereal water in any proportion suited to the individual child and its weight, or it may be given whole or with very little water added where a large amount of concentrated food is necessary to produce a gain. This latter is the case when the stools are smooth and the infant not gaining from 6 to 8 ounces per week. An increase in the strength of the milk formula and the addition of more sugar make it possible to give even a young infant a satisfactory amount of food of a digestible nature.

Clinic of Dr. G. Leonard Harrington

Department of Psychiatry

SUGGESTION, A FORM OF PSYCHOTHERAPY

A deeper understanding of suggestion reveals its significance and its universality. Titchener, professor of psychology at Cornell, defines suggestion as "any stimulus external or internal accompanied or unaccompanied by consciousness, which touches off a determining tendency."

Determining tendencies may be either inherited or acquired "systems of reflexes which function in serial order when the organism is confronted by certain stimuli" (Watson.) In the human the inherited determining tendencies are considerably less organized than in the lower animals. This lack of organization makes the human more dependent but at the same time gives a greater opportunity to transform the power of the original tendencies into power that permits a greater contribution to society. It is this plasticity that makes Dewey say the child is the pivot of society.

Education is the process by which this raw material is woven into habits. Burnham holds the determining tendencies are the background or basis for education, whether for health or for scholarship and the method of sound education, whether natural or formal, is suggestion. The essential characteristic of habit is not repetition but dynamics. Habit is "an acquired predisposition to ways or modes of response —special sensitiveness or accessibility to certain classes of stimuli, standing predilection and aversion—it means will—it is always looking for opportunity for expression." (Dewey.)

The weaving process is carried on largely, perhaps, through the instrumentality of the conditioned reflex. The original tendencies

are multiplied into many by associating with the primary, adequate stimulus a secondary inadequate one—this can be done apparently through any receptor field. Pavlov found the placing of ice on the dog's back could bring about the flow of saliva if this secondary stimulus had been previously associated with a primary adequate stimulus—meat under the dog's nose. Recently a boy was seen going across a yard with a flock of chickens following him. At the time he had no food but since the stimuli from his person had been previously associated with the stimuli from food the above response occurred. On seeing a pupil that looks or acts in any way like a previously taught pupil a teacher may react toward the new pupil as she did toward the earlier one. Children have been mistreated because of this mechanism—the process may be unconscious.

The sensory fields through which these primary or secondary stimuli pass act as so many finger-like processes projecting into the environment and when they contact adequate stimuli the associated energy is "touched off."

To get at the energy of the organism, therefore then, means the finding of adequate stimuli, unconditioned or conditioned, and exposing the organism to them. This may be done consciously or unconsciously. Active suggestion is to do the thing consciously. General Pershing, it is said, asked the War Department to send musicians to France—all know the energy releasing power of music. Osler in his little book, "A Way of Life," tells how he, when a young man, read in a catalogue of a Canadian college that the students of the senior class were permitted to go into the parlor in the evenings to learn to sing and to dance. He says he never learned to do either but at that college he met Dr. Johnson, who knew nature and how to get boys interested in it. The statement in the catalogue "touched off" his interest in music and dancing which brought him in contact with Dr. Johnson who "touched off" his interest in nature. Latent powers were thus brought to the surface through the instrument of an external stimulus—suggestion. This was true of Oliver Wendell Holmes for he says that after hearing Emerson he felt as though he were walking on air.

In applying the above principles in psychotherapy a helpful plan is to have the patient relax. An absence of tenseness permits automatic physiological processes to carry on as satisfactory as any possible physical or chemical limitations will allow. This gives a feeling of well-being for it liberates the building up processes of the body. Then, too, freedom from tense states liberates the subconscious mind so that it can send into the conscious mind the material necessary to meet the present situation. A fear of failure on the part of the public speaker inhibits his mental processes so that even though he has something worth-while to say not an item of it comes into his conscious mind—he is "stage struck."

Relaxation not only facilitates certain physiological and psychological processes but reduces resistances so that stimuli from the psychotherapist may more easily reach the "vital reserves" (determining tendencies) within the individual. In this work it is therefore necessary to know something of the acquired tendencies as well as to remember the inherited tendencies for an effort is to be made to "touch off" the worth-while tendencies.

A man in the thirties came in complaining of a very distressing fear of his superior officer. This fear had made him restless, sleepless and appetiteless. His history revealed the fact that he had been greatly frightened for some time by a male relative a good many years ago. He had had a good education. He is a sober, serious and altogether worth-while man. The company for which he worked had transfered him from one department to another, presumably to teach him the business. But in spite of all this his fear was about to overcome him. He was relaxed four or five minutes and in that short time he was told in a very emphatic way that he had large quantities of "vital reserves" for nature at his birth had given him his biological inheritance written as systems of reflexes in his nervous system and that through this nervous system these systems of reflexes were connected up with the storehouses of power in his organs, and too in addition to that he had power as the result of his personal experiences (acquired determining tendencies—habits) at home, school, college and in the business world. At another sitting the idea that he could get another job if it were desired was strongly emphasized by saying anyone with his training, general and special, could get one for the business world was looking for his type.

Well, the man after a few treatments felt freer and in a short time asked for and re-

ceived a raise. And then the head office sent special instructions about his future work. This goes to show the man is of real worth and all that was done was the releasing of his latent powers.

Bateson, the noted English biologist, says the great difference between the genius and the common man is that the genius is free of the inhibitions that interfere with ordinary men. If this is true then there is much to be done through relaxation, mental and physical, and suggestion. The former tends to remove inhibitions and the latter to "touch off" the determining tendencies.

Suggestion is one form of psychotherapy.

SUMMARY

1. Suggestion is "any stimulus external or internal accompanied or unaccompanied by consciousness, which touches off a determining tendency."

2. Inherited determining tendencies (instincts) and acquired determining tendencies (habits) are dynamic.

3. The conditioned reflex enlarges the field of activity of the inherited determining tendencies by increasing their contacts with the environment.

4. The great task of life is to expose the organism to the stimuli that will "touch off" the determining tendencies in such a way as to make the greatest possible contribution to society.

5. It is held that the great difference between the genius (individual using well and fully his biological and sociological inheritances, i. e. inherited and acquired determining tendencies) and the common man is the fact that the genius is free from the inhibitions by which ordinary men are handicapped.

6. If the above statement about the genius and the common man is true then there is much to be done through relaxation and suggestion.

HISTORY OF THE KANSAS MEDICAL SOCIETY

(Continued from May, 1925)

The next annual meeting was held on May 11, 12 and 13, 1880, at Leavenworth. Fifty-seven members were present at this meeting and thirty-four were admitted to membership. One member was expelled for making false representations in his application, claiming to be a graduate of Rush Medical College, which claim was shown to be false.

A resolution was adopted encouraging the organization of a State Pharmaceutical association, and another resolution was adopted:

Resolved, That a committee of three be appointed by the Chair to memorialize the legislature and cooperate with the druggists of the state in procuring legislation regulating the sale of drugs."

The report of the State Board of Examiners was read. This report showed that since the appointment of the board, certificates had been issued to 663 graduates upon presentation of diplomas and to 148 applicants after examination. Two hundred and sixty-seven applicants were examined by the board and of these 119 were rejected. Thirty-nine applicants failed to appear or complete their applications and their names were included among those rejected. Only applicants belonging to the regular school were examined. The board had officially visited 63 counties. According to a provision in the law physicians practicing in counties that were not visited officially by some member of the board were exempt.

The law provided that no examinations should be held after April 1, 1880, so that 158 applicants who applied after that date were refused certificates.

It was expected that members of the Society would be exempt, under the provision of section 12 "that no person who holds a certificate heretofore granted by either of the societies mentioned in the 2nd section of the act shall be compelled to procure a new certificate, or be liable to any penalty for failure to do so." The board, however, ruled that under section 4, it was authorized to demand a fee of five dollars from each graduate or licentiate. So that the hundred or so who joined the Society at the last meeting were somewhat disappointed. The board also ruled that those who had practiced in the state for five years were not exempt as provided in section 12 because provision had been made for only two forms of certificates, one for graduates and one for those licensed by examination. And these also were requested to present themselves for examination with the required fee.

But trouble was already brewing as indicated by the following extract from the president's address at that meeting: "We have been operating under this law for nearly one year, and while we find in the main it served the purpose, as a member of this Society I desire to enter my protest against any law creating more than one

board, and which in this state has well nigh had its object defeated by the cupidity and vileness of one of the boards created by the law * * * In the last few weeks an effort has been made to cast a doubt upon the legal existence of the corporate powers of this Society, and an opinion has been procured from a law firm to the effect that the Kansas Medical Society has no legal corporate existence, and had no authority to appoint a Board of Examiners under the law of 1879, and that certificates issued by such board will not protect the holders of the same from the penalties of the act. This opinion was procured at the instance of the board, previously mentioned as mercenary, and published, at advertisement rates, in different parts of the state, as well as in circular form, attached to an advertisement of the "Eclectic Board," they, the "Electic Board," considered the certificates issued by the Board of Examiners of this Society "invalid in law," and that its Board of Examiners would issue certificates to all who hold certificates from the board appointed by the Kansas Medical Society, on the payment of five dollars, and, as I understand, in direct violation of the express limitations of the law, which provides that no examination shall be held after the first day of April, 1880.

The written opinion of eminent lawyers has been obtained by the president of the Board of Examiners of the Kansas Medical Society, in which it is unqualifiedly held, that it has a legal corporate existance, and that the certificates issued by its Board of Examiners are legal, and will fully protect the holders.

The whole matter has the look of an unprofessional and unwarrantable attempt to levy blackmail against the members of the regular profession. It is sincerely to be hoped that none will be, and I believe none of the profession have been, gulled by the trick, and my advice is, that no further notice be taken of the matter."

A petition was filed against the Society by the attorney general on May 27, 1880. From certain statements made by members of the board it is presumed that the action was brought at the instance of the board, that the statutes of the Society as well as the law might be definitely determined. The case was not decided until February, 1881. There are so many points of interest in this decision it seems best to give it in full.

THE STATE OF KANSAS, ex rel., v. D. W. STORMONT, et al.

Syllabus By the Court.—Horton, C. J.

1. The Kansas Medical Society, a Legally-Existing Corporation. The Kansas Medical Society was lawfully chartered by the territorial legislature, February 10, 1859, and endowed in its act of incorporation with the attribute of perpetual succession forever. Held, That the act is not in conflict with § 1, art. 12 of the state constitution; that the acceptance of the state constitution by congress, on January 29, 1861, did not suspend or repeal the act; that if the state has the power to suspend or repeal the act, (which we do not decide,) it has never exercised, nor attempted to exercise, the power; and held, further, that the society is a legally existing corporatio nat this time.

2. Ch. 122, Laws of 1879, Invalid. The provisions of the act of the legislature, entitled "An act to regulate the practice of medicine in the state of Kansas," approved February 27, 1879, confer corporate powers upon the Kansas Medical Society, and the other incorporated societies therein named; and as this act confines the designation of examiners to three societies only, it is in the nature of a special act and is therefore obnoxious to §1, art. 12 of the constitution.

ORIGINAL PROCEEDINGS IN QUO WARRANTO

The petition herein was filed in this court by the attorney general, May 27, 1880; the answer of the defendants, D. W. Stormont, W. W. Cochrane, C. C. Furley, R. Morris, S. F. Neely, C. H. Guibor, and G. W. Haldeman, was filed July 29, 1880; and the demurrer thereto, August 25, 1880. The act incorporating the Kansas Medical Society which act was pleaded in the first defense stated in the answer, is as follows: (see page 42, Feb. 1925.)

The defendants admitted that they had so acted, and that they do so act, as the board of examiners of the Kansas Medical Society; but said that they had so done, and that they so do, solely by virtue of the act aforesaid, and by virtue of being members of that corporation and among the regular successors of the corporators named in the act, and by virtue of their appointment as such board of the society.

Willard Davis, attorney general, and A. B. Jetmore, for plaintiff.

John Guthrie, Geo. S. Brown, C. M. Foster, and Peck, Ryan & Johnson, for defendants.

The opinion of the court was delivered by

HORTON, C. J.: This is an original action commenced in this court by the State of Kansas on the relation of the attorney general, against the defendants, D. W. Stormont, S. F. Neeley, C. C. Furley, C. H. Guibor, R. Morris, W. W. Cochrane and G. W. Haldeman, who comprise the board of examiners of the Kansas Medical Society, appointed under the provisions of the act of the legislature, entitled "An act to regulate the practice of medicine in the state of Kansas," approved February 27, 1879. The object and prayer of the petition is, to require the defendants to show by what authority or right they exercise the duties of medical examiners. The answer sets forth that the Kansas Medical Society is a legally-incorporated body, and that the defendants exercise their duties by virtue of the act of February 27, 1879 To this answer the plaintiff has filed a general demurrer. The disposition of this demurrer is to determine the case. It is contended by the counsel representing the state, that the Kansas Medical Society is not a legally-incorporated body, and that it does not possess the power to appoint a board of examiners under the act of 1879. The reason for this contention, as summarized by counsel, are:

1. That the charter of the society has expired by statutory limitation.

2. That the power of the territorial legislature, being permissive and temporary only, could confer no vested right by contract or otherwise, which would bind the state against its consent.

3. That the charter of the society was granted by a territorial act, not accepted or preserved by the state; and

4. That the legislature did not, and has not the power under the constitution, to recognize or validate the existence of the society, nor to grant it additional powers by the act of 1879.

As all these objections to the existence of the corporation, and the future action of the defendants as a board of examiners, are fully discussed in the briefs, we shall consider them without reference to whether they are fairly raised upon the record.

The society was incorporated by a special act of the territorial legislature, on the 10th day of February, 1859. The first section of the act provides "that Amory Hunting, S. B. Prentiss, J. P. Root, ... and their associates and successors, who shall be elected to membership as hereinafter provided, are hereby constituted a body corporate and politic, by the name of the 'Kansas Medical Society,' and shall have perpetual succession forever." It is conceded that the legislature of the territory had the power to incorporate the society by a special act. Having the power to create the corporation, it had the further power to endow it with all the attributes of a corporation, not inconsistent with the provisions of the constitution of the United States and the act organizing the territory of Kansas, approved May 30, 1854. Chief Justice Marshall, in giving a practical definition of a corporation and its uses, says: "It is an artificial being, invisible, intangible, and existing only in contemplation of law. Being the mere creature of law, it possesses only those properties which the charter of its creation confers upon it, either expressly or as incidental to its very existence. These are such as are supposed to be best calculated to effect the object for which it was created. Among the most important are **immortality**, and if the expression may be allowed, **individuality**—properties by which a perpetual succession of many persons is considered as the same, and may act as a single individual . . . By these means a perpetual succession of individuals is capable of acting for the promotion of the particular object, like an immortal being." (Dartmouth College v. Woodward, 4 Wheat. 636.) Therefore, within this definition, immortality is a legitimate attribute to be conferred on a corporation. Of course, we speak of such immortality only as may be created by law. Even then ,it is not literally true that a corporation is immortal, as in point of fact, like natural persons, it is subject to death and dissolution in various ways, and in some states can only be created for a limited period, and in others, like ours, only organized under general laws, which may be amended or repealed at any time. (State Const., art. 12, § 1.) Yet, when not limited or forbidden by constitutional or organic law, the right to confer perpetual succession by legislative authority, so far, at least, as human agency can confer such an attribute, cannot be logically questioned. Perhaps we might go farther and say, (speaking in a comparative sense,) a corporation is presumably immortal; that words of limitation or exception are essential to deprive it of that attribute.

As the "Kansas Medical Society" was endowed with perpetual succession or immortality in its creation, we next inquire whether the constitution of the United States, or the organic act, or any territorial law, restricted or limited its term of existence. It is not alleged that the act of incorporation contravened the fundamental principles of the constitution of the United States, or the organic law of the territory; it is contended only, that the charter expired by limitation on February 10, 1869, under the provisions of the act of 1855 concerning corporations. This act, among other things, provided as follows:

> "Sec .1. Every corporation, as such, has power, first, to have succession by its corporate name for the period limited in its charter, and when no period is limited, for ten years." (Laws 1855, pp. 185, 193).

As the special act of February 10, 1859, creating the society, only limited the life of the corporation to the end of all human affairs, or the close of finite existence, the law of 1855 has no application. Again, it was not in the legislative mind that the law of 1855 should apply to this act, because the next day after its adoption, (February 11, 1859), the general corporation act of 1855 was repealed by the territorial legislature. (Laws 1859, p. 544, § 1). Furthermore ,the legislature of 1855 could not impose any limitation on the legislature of 1859, and the latter legislature, having granted the society "perpetual succession forever," the only limit to its existence is, the end of all things, unless subsequent laws, constitutional or state, have or shall suspend or repeal its charter. This much is clear—the charter did not expire by the law of 1855.

The second obpection deserves only a passing notice. Whether the state legislature can suspend or repeal the special acts of incorporation adopted by the territorial legislature prior to the admission of the state into the union, is not before us, and, so far as this case is concerned, it may be left an open question. No attempt has been made by any state legislation to repeal the charter of the society, or limit its corporate life. On the other hand, the act of February 27, 1879, in clear language recognizes the society as an existing corporation. Until the institution of this suit, no attempt had ever been made to debar it from doing business; nor had its life ever before been attacked or threatened by a state official.

If we properly understand the nature of the third objection, it is. that as the act of incorporation was granted by the territorial legislature, and as § 1. art. 12 of the state constitution inhibits the state legislature from conferring corporate powers by special acts, the charter of the society, upon the acceptance of our constitution by congress, at once ceased to have validity—that then its life instantaneously ended. In brief, that the territorial act of incorporation then suffered sudden and permanent syncope by the higher law of the constitution; and as the act of incorpation has not and could not be rehabilitated, or the corporate existence revivified by the state legislature, on account of § 1, art. 12, the society had no corporate existence after the admission of the state into the union. Now, § 4 of the schedule of the constitution provides that "all laws and parts of laws in force in the territory at the time of the acceptance of this constitution by congress, not inconsistent with this constitution, shall con-

tinue and remain in full force until they expire, or shall be repealed." In **The State** v. **Hitchcock**, 1 Kan. 178, this court held that all laws passed by the territorial legislature, until superseded, according to the mode prescribed by law, if their provisions were not in conflict with the constitution of the United States, or of the state, were valid. But counsel assert that the territorial act is inconsistent with § 1, art. 12, which reads: "The legislature shall pass no special act conferring corporate powers. Corporations may be created under general laws; but all such laws may be amended or repealed." This section has already been judicially interpreted by this court as a limitation upon the legislative power of the state, as prospective, not retroactive, and therefore it has no restraint or control over the acts of the territorial legislature. In **Atchison** v. **Bartholow**, 4 Kan. 124, it is said "that the whole of article 12 is merely restrictive of the general power conferred by section one of article two. It adds nothing to the power of the legislature, nor could it have been so intended. All legislative power upon the subject had already been conferred. It may be true, that the legislature, in exercising the power ,might have done precisely what this clause requires of it, had it been omitted; but it seems to have been thought expedient to compulsorily restrain its action, and such alone was manifestly the intention of this article. . . . Before the adoption of the constitution, the practice was to create corporations and organize cities and towns by special laws. . . . To prevent just such abuses, and others equally meretricious, the twelfth article was inserted in the constitution."

Again, in **The State** v. **The Lawrence Bridge Company**, 22 Kan. 456, the language of the opinion is: "Before the adoption of the constitution, the practice was to create corporations by special laws. This practice resulted in partial, vicious and dangerous legislation. To correct this existing evil, and to inaugurate the policy of placing all corporations of the same kind upon a perfect equality as to all future grants of power, . . . it was ordained," etc.; and in speaking of § 25, ch. 23, of Gen. Stat. 1868, it is stated, p. 458: "If sustained, corporations can again be created or extended in their existence all over the state with such powers and franchises as the territorial legislature may have conferred by special charters at its pleasure or caprice when its power unrestricted by any such wholesome constitutional provision as is imposed by § 1, art. 12, on the legislative power of the state."

The Lawrence bridge company continued to exist as a corporation to February 9, 1878, although it was created by a special act of the territorial legislature, on February 17, 1857, notwithstanding § 25, ch. 23, Gen. Stat., had no effect to continue it in the enjoqment of its franchise. The charter of that corporation, although not preserved or continued in force bv the state in any manner other than as the Kansas Medical Society has been preserved, existed in full vigor for over seventeen years after the acceptance of our constitution by congress. The "Paola town company," chartered October 13, 1855, did not cease to exist till 1865—over four years after Kansas became a state. (**Krutz** v. **Paola Town Co.**, 20 Kan. 397). If the theory of counsel is correct, then every ferry, bridge, railroad or other like corporation, incorporated by special acts prior to the admission of Kansas as a state, was stricken down and blotted out in 1861. Certainly no such wholesale slaughter of corporations was ever intended by the framers of the constitution, (even if they had the power to accomplish it), and neither reason nor authority supports such a doctrine. We doubt even whether counsel would be willing to follow the logical results of their argument to this extent. (**Vincennes University** v. **Indiana**, 14 How. 268).

Our conclusions upon the foregoing matters are, that the Kansas Medical Society was lawfully chartered by the territorial legislature; that it was legally endowed with perpetual succession forever; that the constitution did not suspend or repeal its charter; that if the state legislature has the power to suspend or repeal the charter, (which we do not decide), it has never exercised, or attempted to exercise, the power, and that the society is a lawfully-existing corporation.

The final objection, and the most serious of all, is, that the act of February 27, 1879, grants to the Kansas Medical Society additional authority, thereby conferring corporate powers by a special act, and that it is therefore obnoxious to § 1, art. 12 of the constitutian of the state. If this objection is valid, it is equally fatal to the action of the Electic Medical Society and of the Homeopathic Medical Society, in appointing examiners, as the latter societies are, in the law, also denominated corporations, and we believe that their corporate existences are unquestioned. If the Kansas Medical Society were not a corporation, but only an association of individuals, we would have no hesitation in deciding that the legislature had the constitutional right to devolve the power conferred; and if the defendants had not pleaded the act of incorporation, but alleged only that they were acting as citizens, or as an association of citizens, the defense would be sufficient. We could have treated the words, "corporations organized and existing," as merely "**descriptio personarum.**" The state constitution is only a limitation of powers, and as there is no provision forbidding the legislature from authorizing persons, or an association of persons, within reasonable limits, to designate examiners, with the duties defined in the law, its provisions would not be repugnant to the constitution, if confined to persons or societies not in corporated. Clearly, we think, the state, in the exercise of police power, may provide for boards authorized to examine persons seeking to be admitted to practice medicine, to be designated by any citizen or citizens. The fact that the Kansas Medical Society and the other societies named in the law are corporations, presents fully and fairly the inquiry, whether in fact the law confers corporate powers. It is said, in **Gilmore** v. **Norton**, 10 Kan., p. 491: "That any power conferred upon a corporation, and to be exercised by the corporation, is a corporate power; and a power that would not be a corporate power if exercised by an individual, becomes a corporate power when exercised by a corporation." The authority for these societies to appoint annually a board of examiners, (unless we may denominate it the imposition of a public duty,) is the possession of some corporate power conferred by the legislature, and the exercise of such power by the incorporated societies, (unless it be the assumption of a public duty,) is the exercise by the corporation of corporate power. If the law limited the power conferred to the mere designation of examiners, whose duties are entirely separate and independent of th ecorporations, and if the control or direction of the corporations over the ex-

aminers ceased with such designation, and if the exercise of the selection of the examilners were not profitable or beneficial to them, the law might be held valid; this, upon the principle solely, that the state by the law imposed a public duty on the corporations, and the performance of the duty is the assumption of a public duty. To illustrate: Suppose that the legislature, by an act at its present session, should ask the city of Topeka to designate a civil engineer to examine and report to the board of statehouse commissioners, at the expense and under the direction of the state, the depth, strength and character of the foundation walls of the west wing of the state house just completed; or, suppose that the city of Leavenworth were authorized to appoint a commissioner, in the interest and at the expense of the state, to attend the world's exposition to be holden in New York City in 1883—we are inclined to think that such acts would be constitutional. In these cases there would be virtually no franchise or power, and no pecuniary profit to the corporations. But the law of 1879 does not restrain or limit the authority conferred to the mere designation of examiners; it requires that the certificates shall indicate the medical society to which the examining board is attached, (Laws 1879, ch. 122, § 3); that the candidates shall pay a fee of five dollars, in advance; that all the fees received by the examiners shall be paid into the treasuries of the medical societies by which the boards are appointed, and the expenses and compensation of the boards are subject to arrangements with the societies. (Sec. 8, supra). The act is entitled "An act to regulate the practice of medicine in the state," yet, under its provisions, all the fees collected go into the treasuries of the societies, and thus increase, more or less, according to the number of applicants, the funds or assets of each society. By these provisions a revenue is collected directly from each candidate for some one of the corporations, and, to the extent of the fees, less the expenses and compensation returned to the examiners, the law is for the emolument and benefit of the corporation. It confers power, the exercise of which secures pecuniary profit. Under the law, to some extent, a revenue is levied and collected on certain individuals.

Again, the power given the corporations to regulate the compensation and expenses of the examiners, gives them, in some degree, control over their appointees, and thus further corporate power is granted, the exercise of which by the societies is the exercise of corporate power. In our opinion, therefore, the law of 1879 does confer corporate powers on the several societies designated to select examiners, and is, in consequence thereof, unconstitutional and void. **(Atchison v. Bartholow**, 4 Kan. 124; **Gilmore v. Norton**, supra). We have arrived at this conclusion with some hesitation, conscious that if practicable, we should favor the validity of the law, so as to give it force and effect, rather than to avoid it, or render it nugatory; but the closer our examination, the more positive are our convictions of its conflict with the constitution.

Again, some of the provisions of the law are in the interest of the public health, and attempt, in a feeble way, to protect the public from empiricism and malpractice, and thus far, are so worthy in their general purpose that we would gladly uphold them, in all their terms; but the constitution is paramount, and in our allegiance to it, it becomes our duty in a clear case, to strike down the statute, rather than to permit it to encroach upon or override the fundamental law of the state. As was said in **The State v. The Lawrence Bridge Company**, supra, p. 457:

> "An evasion of so important a provision of the constitution ought not to be favored in any degree. The abuses and corruption in legislation are mainly the result of private and special laws, and the remedy, and the only remedy, which has proved effectual to prevent this, is found in severely depriving the legislature of the power to legislate for any citizen (or corporation) in preference to or at the expense of the whole. **Obsta principiis** —stop the beginnings, and stop them decisively, is very necessary to such legislation."

We have not thought it important to discuss the question whether the act is a special act in confining the selection of the examiners to three medical societies only, and in giving them special powers and privileges not conferred on similar corporations, as it seems to us no argument is needed to sustain the proposition. Counsel do not challenge this view, and comment thereon is useless.

At one time in our investigation, we hoped to so separate the invalid provisions of the law, as to preserve the duty to the several boards to designate examiners, but the invalid provisions are so united with the other portions, that it seems that it was the intention of the legislature to build up and aid pecuniarily the corporations named, as well as to carry out the general purpose indicated by the title; therefore the poison cannot be withdrawn, so that the life of the law can be saved. If the section which is clearly unconstitutional is stricken out, no provision is left for the payment of the examiners, nor for carrying fully into effect the law.

The result we have reached, after having endeavored thoroughly to understand the subject, obliterates for all practical purposes the statute. If the Kansas Medical Society cannot appoint examiners, and obtain the benefits of the fees collected from the applicants to its board, because it is a corporation, then the Electic Medical Society and the Homeopathic State Society (if they are corporations) are likewise debarred from enjoying the powers conferred by the law. If there are no societies to designate examiners, no examiners can be chosen; and if no examiners can be chosen, no certificates can be granted; if no certificates can be granted, the other provisions are lifeless, and without power of enforcement. It is better that this conclusion be declared at once, while the legislature is in session, than that it be postponed to a future day, because the consequences need not be disastrous to the public. The law-making power can easily correct and remedy the vice of the existing statute, and replace, in a very few days, the obnoxious law, with one harmonious and constitutional. The appointments may be lodged, perhaps, with the societies, if the power conferred is limited to the mere designation of examiners; or the governor or some other officer or person may be designated to select the examiners from the societies. Of course, the fees of the applicants cannot be turned over to two or three corporations, so as to confer on them alone special powers and privileges not enjoyed by other medical societies incorporated by law. As the fees already paid by the applicants have been advanced under a mistake of law and not of fact, no recovery of them can be had; unless, therefore, they are vol-

untarily returned to the candidates, the corporations will retain them. As the defendants have no legal authority to perform the duties of examiners under the act of 1870, owing to its invalidity, the answer fails to set forth a good defense, and the demurrer thereto must be sustained.

Judgment rendered for the plaintiff for all costs.

All the justices concurring.

The State of Kansas, ex rel., v. D. W. Stormont, et al. 24 Kan. 686.

(To be Continued)

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Reduction of Increased Intracranial Pressure

Max M. Peet, Ann Arbor, Mich. (*Journal A.M.A.*, June 27, 1925), says that the slow reduction of increased intracranial pressure in the absence of shock, hemorrhage, vomiting or dehydration is satisfactorily accomplished by the oral or rectal administration of magnesium sulphate. The rapid reduction of intercranial tension, in acute intercranial traumas unassociated with shock, is best accomplished by the intravenous administration of hypertonic Ringer's solution. Glucose may be given later to maintain the lowered intracranial pressure. Hypertonic glucose solution administered intravenously is indicated when acute intracranial pressure is associated with shock or hemorrhage, and in the less acute cases when complicated by dehydration, nausea and vomiting. Glucose has the following advantages over any of the salt solutions: prolonged action, no terminal rise in pressure, nontoxicity, nondehydration, increased blood volume in shock, and the control of acidosis.

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Ivy Poisoning

The problem that has been studied by G. L. Krause and F. D. Weidman, Philadelphia (*Journal A.M.A.*, June 27, 1925) has been that of the preventive phase of ivy poisoning and not of the cure of the already established disease. Therapeutics was the second phase of their work. The work done by the authors confirms that: The discharge from the lesion does not disseminate the disease; the virus itself must come in contact with the part. Susceptible individuals may contract ivy poisoning at any time of the year, provided the juice of the plant comes in contact with the skin. As new findings they report that: Repeated attacks tend to shorten all the stages of subsequent attacks. Local immunity is not developed by repeated attacks of ivy poisoning. There is such a thing as absolute (and probably permanent) immunity against ivy poisoning. In their series, two thirds of the men who believed themselves immune were not immune. In 45 per cent of the susceptibles it was necessary that some such defect in the epidermis, as scratches, should be present before a dermatitis would develop. It appears that all of the commoner laboratory animals are immune to this virus. Pruritus ani, transient, appeared in the majority of those receiving preventive treatment; in two subjects, hemorrhoids were aggravated. The pain at the sites of intramuscular injections outweighs the danger of future attacks of ivy poisoning such as are only suppositious in the commoner walks of life. In their series of sufficiently controlled subjects, the preventive system of treatment of Strickler did not prevent; it is possible that the curative value of this system is likewise scant or nil, and that the beneficial results which have been reported are depended on and ascribable to the variable susceptibility of different individuals and the varying intensity of the irritant as applied at different times.

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Two Primary Tumors of Gasserian Ganglion

Ethel G. Russell, Philadelphia (*Journal A.M.A.*, Feb. 7, 1925), reports two cases of endothelioma of the ganglion. The tumors were removed by operation. Both of these cases showed early involvement, and one did not permit differential diagnosis from trigeminal neuralgia. While the immediate results in both cases were relief of pain, the ultimate prognosis is not hopeful. Recurrence is the rule rather than the exception, and often the pain persists even after removal of the tumor. The theories that have been advanced in explanation of this phenomenon include: (1) the extension of the tumor into the stump of the fifth nerve, and (2) the development of a neurosis of functional origin as a result of the previous intense suffering. In 25 per cent, of the cases, the lesion is an endothelioma, and, curiously enough, the left side is affected in 60 per cent of the cases. Marchand has described in greater detail than any other observer the structure of these endotheliomas. Scattered through a reticulum of connective tissue fibrils are round epithelial cells with a clear homogeneous cytoplasm. At times there is acinous formation, comparable to the lining capsule of the ganglion and also to the sheath of Schwann. This might indicate that these tumors are an undifferentiated stage of ganglion anlage; if so, "neurozytoma" would be an appropriate term for them.

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W. E. McVEY, M.D. - - Editor

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IMPROVED CONDITIONS—IMPROVED METHODS

Progress in medicine has been very rapid. The accumulated knowledge has out grown the individual. The recognition of this fact gave birth to the first specialists. The successful outcome of the early ventures in specialism had something to do with the present popularity of limited practice, but the general recognition of man's limitations fixed the permanency of that kind of practice.

Specialists have added considerable to the store of medical knowledge, each in his own field, so that at this time a competent general practitioner, such as once existed, is now an impossibility. There is no such thing, if by that term is meant one who is competent to diagnose and treat all the ills of the body.

It is certainly not the purpose of the present medical college curriculum to produce general practitioners of that type, nor does any existing need for them justify the curtailment of the regular medical course either in time consumed or volume of work required. Whatever demand there may be for poorly equipped physicians is now amply supplied by the various substitutes for doctors.

The trouble is not with the present system of medical education nor with the type of men graduated, but failure on the part of the medical profession to adapt its business methods to the changed conditions.

It is no longer possible for an individual physician working by himself to give the people efficient service without more of an outlay for professional and technical assistance and office equipment than his business will justify, nor could any but the wealthy members of his clientele afford to pay the fees he would be compelled to charge. Under the present system when a patient must be sent to the laboratories for tests and to various specialists for examination the expense in much greater than the average income will bear. In other words under the present system of practice the cost of efficient service is too high and the returns to the physician too low.

Other plans must ultimately be adopted and at the present time it appears likely that these will be inaugurated by those outside the medical profession.

A pay clinic was established by Cornell University Medical College in 1921. A report has just been issued which should offer some valuable suggestions to the medical profession. The report is prepared by the executive secretary of the Committee on Dispensary Development of the United Hospital Fund of New York City. There are twelve members of this committee not including its executive secretary. Of these members only five are doctors of medicine.

If this committee had been made up entirely of doctors of medicine it is doubtful if the plans would have reached maturity; it is doubtful if medical men alone would have had the courage to attempt the establishment of such a clinic or if they could have withstood the criticism and the ostracism such a movement would have occasioned. There was much criticism from the medical profession but this was finally largely overcome and we venture that it was the lay influence rather than the medical that succeeded in doing so.

It may be interesting to quote from this report a paragraph that suggests the situa-

tion which the clinic was established to meet:

"It has been recognized for some years that in time of sickness persons of moderate means were less well provided with adequate medical services that either the well-to-do or the poor. But the action of the Medical College of Cornell University in the autumn of 1921 in establishing an agency with the particular purpose of providing medical service for persons of moderate means was a practical, not an academic evidence of belief in such a need, and at the same time was a means of testing its reality and gauging its extent. In the spring of 1921 it was estimated that within the City of New York there were not less than two million persons who, while self-supporting, were not able to purchase sufficient medical service at the usual private rates to care properly for more than minor or inexpensive sickness. Information secured since that time indicates that the number of the city's population falling into this group is not less than the estimate of 1921."

The services of this clinic are offered only to those who are able to pay. In the beginning each patient was charged one dollar with additional fees for laboratory tests, medicines and appliances. This fee was later raised to one dollar and fifty cents.

Over a thousand persons applied for treatment the opening day, but during the second year the business had settled down to an average of 450 patients a day. In all 55,000 different persons have been treated since the opening in the autumn of 1921. It was estimated from the records that 59% of these cases had been previously under the care of a private doctor.

It is well here to remember that these are not poor people. The report says in regard to the financial satus of these people:

"The characteristic Cornell patient is a member of a family of two or three members, with an income of about $2,400 per year. The average wage of a Cornell patient is about $1,800 per year, there being on the average somewhat more than one wage earner per family."

It is further stated that two-thirds of the families of New York have incomes of under $2,500 per year.

Cornell, with the aid of the Committee of Dispensary Development has successfully established a pay clinic in competition with a majority of the practitioners in New York for the patronage of over 2,000,000 of its self supporting citizens. A formidable competition which offers a superior kind of service with fees below the minimum charge of private practitioners. As a pay clinic it has proven a success, both in point of service and as a financial investment. There was a considerable deficit at the end of the first year but the deficit for the next year was very much less and during the nine months period ending March 31, 1925, the income exceeded the current expense by nearly $6,000. Approximately $90,000 is paid to physicians connected with the clinic. Some of these receive regular salaries others are paid by the session (2½ hours) from $5.00 to $7.00 each. It is estimated that the different groups are paid for the time of service on the basis of annual salaries of from $4,000 to $10,000.

The author of the report of the Cornell clinic does not favor the establishment of clinics of this kind to be operated along commercial lines. He thinks they should be public enterprises, but conducted on a self supporting basis. There seems to be a consensus of opinion among all the lay organizations whose activities are centered in public health that sickness is a calamity the burden of which should fall mostly upon the medical profession. Their plans for relief usually contemplate the donation, or partial donation of the doctors servivces and the supply of other requirements at cost. The Cornell clinic has demonstrated that the department store plan adapted to the proctice of medicine makes a strong appeal to the public, and the item of cost is a secondary matter. It is quite probable that the clinic could have charged the same fee for office calls as private practitioners and succeeded just as well. In the matter of fees the most important feature is the reduced cost for laboratory tests, x-ray examinations, etc.

It has been demonstrated by other or-

ganizations that the plan can be successfully carried out on a commercial basis. To what extent such a plan could profitably be pursued in less populous sections of the country must depend upon the willingness and ability of the doctors to co-operate. With good roads and automobiles the doctor is as accessible to the family twenty miles away as he was twenty-five years ago to the family only five miles away. If the physicians in an area forty miles square would equip themselves for special lines of work and form a clinic group with the necessary equipment at the most centrally located town, where they would meet at regular times, for the examination of complex and difficult cases, the improved efficiency of the group would make a strong appeal to the community and the service could be rendered profitably at a cost very much below that under the present conditions.

ANTI NARCOTIC EDUCATION

According to information received it is proposed by Captain Hobson, president of the International Narcotic Education Association, to hold a world conference on Narcotic Education at Philadelphia next summer. Congress will be asked to provide funds for the participation of this government in the conference. In the meantime a nation wide campaign of education is being promoted by the Association, and the press, the pulpit, the motion pictures, the radio, educational officials and organizations of all kinds are invited to participate.

Perhaps no official estimate of the extent of addiction to narcotic drugs nearly approximates the actual situation. In 1919 the Treasury Department estimated that there were 1,000,000 drug addicts in the United States and that the number was increasing. In New York it is estimated there are 200,000 so called "underworld addicts." It has also been estimated that from 40% to 60% of criminals are drug addicts. These investigations have also shown that heroin is the favorite drug among the criminal classes and that with the increase in the use of heroin crime has also increased. There can be no question about the seriousness of the situation, nor is there any doubt that it is growing worse.

There is some ground for the claims sometimes made that the anti-narcotic laws have increased the number of criminals and the amount of crime. Eliminating his source of supply does not relieve the drug addict of his need for his accustomed dose. The demand remained and with no legitimate supply the development of illicit traffic in narcotics was to be expected. The more interference with this traffic and the stricter the laws against it the more desperate the addicts become and the more daring and more lawless the traffickers.

There is some question as to the nature of the relationship between the consumption of opiates and crime. Or rather it is doubtful if the effect of opium on the individual tends to increase his criminal inclinations. It is claimed by some of the most careful students that it does not.

The most important consideration in reference to this campaign of education has to do with the possible results of such a movement. It is hardly conceivable that the drug addicts themselves can be reached by such methods or that any considerable number of them could be benefited thereby. Something of the results would no doubt be manifested in the next generation but in the meantime the present situation is not likely to be improved but will probably be aggravated by a continuation of the present methods of dealing with drug addicts.

Drug addiction must be regarded as a disease instead of a crime before any very marked improvement in the situation can be expected. As far as immediate results are concerned the money that will be expended in this educational campaign can be more economically and humanely utilized in the restoration to health and normalcy of these 1,000,000 addicts that are said to exist. Hospitalization and proper treatment, compulsory if necessary, will accomplish more than penalization and imprisonment.

ADVERTISING OR EDUCATING?

Much of the misinformation that the people have about disease has been obtained from the medical profession. Those who are in a position to educate the people and who, on account of the position occupied, are regarded as authorities, are sometimes responsible for statements that are not borne out by such facts as are known.

In a recent number of the Health News published by the New York State Department of Health there appeared an article under the title, "Two Milk-borne Scarlet Fever Outbreaks in Binghampton a Week Apart." Under this title the following account of these outbreaks is given: "Two outbreaks of scarlet fever recently occurred in Binghampton approximately a week apart. According to a report of the investigation made by District State Health Officer Conway, these outbreaks were in widely separated parts of the city and appeared to be due to the milk supplies of two entirely separate dairies selling raw milk.

"The first outbreak consisted of twenty-five primary cases among users of milk from one dairy. No source of the infection could be found in connection with this supply. It is interesting to note that all cows in the herd of this dairy were tuberculin tested. This illustrates the fact that, unlike pasteurization, the tuberculin test offers no guarantee against infections other than tuberculosis.

"The second outbreak comprised nineteen primary cases. It was found that a boy of fifteen who did the milking on the implicated farm was ill with a sore throat a few days before the outbreak took place. According to the local health officer two other children in the family had sore throat followed by desquamation of the hands and feet. Dr. Conway is of the opinion that these cases were undoubtedly scarlet fever, although no physician was called at the time of the illness."

The evidence certainly does not justify the statement made in the title of the article. Granting that the possibility of spreading scarlet fever in this manner may be real, there was no evidence in either of the outbreaks that justified a definite conclusion. Entirely too many of our theories of disease have been based upon such flimsy clinical evidence as that.

SAYS WHICH—SAYS WHO

The wise sayings of a fool are ignored. The foolish statements of a wise man are cherished. It matters less what is said than who says it.

A doctor, for instance, may have a state wide, or nation wide reputation; he may be preeminent in some particular field or practice. The pearls of wisdom dropped from his mouth are gobbled up by his admirers like raindrops by the thirsty travellers on the parched and dusty plains.

The raindrops fall from the clouds, but have been gathered from the Earth upon which again they fall. So the pearls of wisdom fall from the mouths of great men, but they have been gathered from the masses upon whom they are again so graciously conferred.

Facts in medicine are discovered by the plodders, the tireless observers, the patient inquisitive diagnosticians, the men who are insatiable question marks in medicine—silent men as a rule, but persistent seekers for knowledge.

It is from these men that the wise men gather their pearls. Truly, they are sorted and assembled and perhaps, like the pearls that glow upon a fair lady's neck, these pearls absorb vitality and personality from him they adorn. So that when they are passed on they bear his trade mark.

———R———

CHIPS

The automobile foot is in evidence.

Psyosophy is the blanket word for all kinds of ignorance.

Drekapotheker is the name for a druggist who specializes in preparing excrementitious therapeutic products for the medical fraternity.

The *phage* is said to be the smallest and most powerful of all microbes. It is used to kill the germs of pneumonia, typhoid, diphtheria, dysentery and anthrax. They

are strong for their size—according to the publicity agents.

A friend who ought to know, having had no experience in this line, says that to sober a drunk quickly, force inhalations of a gas mixture composed of five per cent of carbon dioxide and ninety-five per cent of oxygen into the lungs.

Energy Index is a term applied by Barach to the amount of energy expended by the cardio-vascular system in one minute, and is computed by multiplying the sum of the systolic and diastolic pressures by the pulse rate. Grover states that the normal range of the energy index is between 13,000 and 20,000; that over 20,000 is not consistent with safety to the vascular system, and that under 13,000 indicates general cardio-vascular weakness.

Every one agrees that it is impossible to state a formula of normal blood pressure, but no one seems to hesitate to declare what should be regarded as abnormal. Some authors regard a systolic b.p. above 140 as abnormal, regardless of age, sex, height and weight. There is more consensus of opinion about the diastolic b.p. however, and a variation of more than 10 mm either above or below 80 usually occasions some suspicion of pathology.

To have been so long neglected, and for an organ so comparatively small, the importance of the tonsil has assumed mammoth proportions in the human economy. Now comes one who says the structure of the tonsil and the appendix is identical and that microscopic sections cannot be differentiated one from the other. Admitting that the exact function of these organs is unknown, he insists, however, that Nature is not a blunderer and that their removal is followed by changes in the system that are notable.

The above is just a preliminary argument to convince us of the importance of his discovery: Tonsilitis is an expression of acidosia. There are four causes of acidosis; too high a rate of protein in the diet, the use of dealkalinized or demineralized food, the concurrent use of protein or acid, the retention of the colon contents too long. Just control these four factors and the source of tonsilitis and appendicitis will be eradicated. See?

The Academy of Medicine of Toledo and Lucas County is a society of 308 members. Of these 245 are active members and pay $35.00 annual dues, 53 are junior members—those who have practiced less than one year—who pay $15.00 and 10 are privileged members who pay only $10.00. This society has recently completed a building for its headquarters. It has some office rooms, a library, a small auditorium and a large one that will seat 600 people.

The State Medical Association of Texas increased the annual dues from $5.00 to $15.00. A fund has thus been raised which enables the society to send public speakers all over the state. Reports indicate encouraging results.

Chili has enacted some new laws concerning social hygiene that should prove effective. An educational campaign is provided for and instruction on the subject in the public schools is compulsory. The government controls the manufacture and distribution of remedies. Only practitioners who hold special licenses are permitted to treat venereal diseases. Those infected are treated by the government free of charge and treatment is compulsory. All cases must be reported. Prostitutes are examined and if found diseased are confined in a hospital until the period of contagion has passed. Those who refuse treatment are confined in a reformatory.

Routine blood sugar tests in cases of diabetes under insulin treatment have brought out some unexpected findings. Attention has been called to a persistent high blood sugar content in patients as persistently free from glycosuria. In the Journal A. M. A., June 13, Major and Davis report a series of cases in some of whom the blood sugar values were over 400 and the urine sugar free. Attempts to reduce the blood sugar with increased doses of insulin resulted in insulin shock. Their conclusions were that the estimation of the urinary sugar was a safer guide to therapy than blood sugar determinations.

Invoicing

BY THE PRODIGAL

The medical profession is taking an inventory of itself. It is a healthy progressive sign and good business. By so doing it will learn its true status as a going concern and the attitude of the laity toward it. Such bookkeeping will show its assets and its liabilities, to itself, and to human kind. By such means it will learn why the public is not more interested in its own welfare, from the medical point of view,

as shown by the laws on the statute books and laxity in their enforcement.

Self examination, without prejudice, is a sign of growth. It shows self initiative; a realization that there is, at least a benign pathologic disturbing element in the body politic, and a remedy is sought. The defection, from regular medicine, as shown by so many denominations or sucker branches —off shoots, from the main body, is sapping its vitality, or at any rate is retarding the growth of regular medicine. It weakens by diffusion. By this inventory it may be learned what and where the effervescing elements are in the body, and intelligent, scientific treatment be given, and the cause removed or antidoted.

One of the causes of the strain, even to the breaking point, or explosion, is the excess of literary and medical baggage the profession is trying to carry. A doctor needs only the professional knowledge he can use in his business each day. The knowledge he cannot use is excess baggage and a hindrance to him.

He cannot carry, let alone use, the baggage and its contents outlined in the curriculum of a "Class A Medical College" of the present day. The baggage must be cut down and the excess baggage and its contents thrown aside, the load lightened and the capacity of the human mind taken into account, to enable it to deliver the goods. Another cause of the loss of prestige of regular medicine may be likened to the loss of prestige of government, and a new remedy or ideal found for it to continue to function normally. The prestige of government, in the past, depended upon its supposed connection with divinity— "The Powers that be, are ordained of God."

The prestige of medicine in mediaeval days, and shadowing the present, depended upon the ability of the profession to head off or squelch the other fellow, the Devil. Voodooism, incantation, miracle and the efficacy of certain drugs, known to the elect, (self elect) constituted, in the main, the armamentarium of the medical man. To regain this prestige, in medicine as well as in government, a new goal must be set —shrine or Mecca found for the human family to worship; and it is up to the regular medical professional to create or establish a prestige to continue to function normally.

Since "The Powers that be" have wandered so far astray and the entity of evil has been unhorsed by the more intellectual part of mankind, a substitute has been found for everlasting prestige in medicine, in science. Demonstrated facts are the shibboleth of regular medicine and accepted to warrant practice. Medicine is not an exact science but enough scientific facts are now known in medicine and surgery to put its name in the Book of Remembrance and to perpetuate itself. Hence the medical man of today, when called to see a patient, does not prescribe a drug for a specific disease unless he knows what the cause of the disease is.

If the patient is suffering, the doctor relieves the pain, gives a placebo and gets time to study, ferret out the cause and treat the patient intelligently and scientifically. Giving a placebo is intelligent treatment, when the doctor cannot diagnose the cause satisfactorily to himself, although the treatment may not be scientific.

Moral: The present invoicing of regular medical education and practice will take into account the potentiality of the human mind; the worth-whileness of medical facts, on hand, and junk all useless, superfluous, excess baggage. (A) And since the prestige of medicine no more depends upon the malevolence of his Satanic Majesty as the cause of disease; and since truth, only, can satisfy the intelligent mind, the slogan for future prestige of regular medicine, as a substitute for voodooism, superstition, and his Satanic Majesty as a cause of disease is—Science.

DEATHS

Dr. Robert A. Stewart of Russell, Kansas, died March 28, at a hospital in Hays following an operation. Dr. Stewart was graduated from the Kansas Medical College at Topeka in 1899. He was a member of the Kansas Medical Society.

Dr. William A. Minnick of Wichita, Kansas, died, in April, of pneumonia and cerebral hemorrhage. Dr. Minnick was graduated from the Kentucky School of Medicine, Louisville, in 1881. He was a member of the Kansas Medical Society.

Dr. Jacob G. Wortman of Mound City, Kansas, died April 26, at a hospital in Fort Scott, of gangrenous appendicitis at 71 years of age. He graduated from the Kansas City (Mo.) Medical College in 1900.

Dr. Frank Albert McDonald of Concordia, Kansas, died May 8, of uremia at 64 years of age. Dr. McDonald graduated from the Bellevue Hospital Medical College, New York in 1887. He was a past

president of the Cloud County Medical Society.

Dr. Henry Wimer of Atwood, Kansas, died May 5 at Hastings, Nebraska, of cerebral hemorrhage at 60 years of age. He graduated from the Electic Medical Institute, Cincinnati, in 1894.

Dr. Arthur F. Higgins, Emporia, Kansas, died April 22. He was graduated from the Hahneman Medical College and Hospital of Chicago in 1884.

Dr. J. F. Hughes of Larned died June 15, at the Mayos, Rochester, Minn. Dr. Hughes had been for the past five years head of the Larned State Hospital. For several years before that time he was assistant at the Osawatomie Hospital. Dr. Hughes was born in 1875 at Antrim, Ohio. He graduated from the University Medical College, Kansas City, Mo., in 1905. He was formerly located at San Diego, Calif., Lyon County, Kan., and Osawatomie.

BOOKS

The Health-Care of the Baby, A Handbook for Mothers, Nurses, and Physicians. By Louis Fischer, M.D. 15th Edition, completely revised, rewritten, and reset. 12mo. Cloth. 267 pages. $1½ net. Funk & Wagnalls Company, New York.

This is a revised edition but it is completely rewritten and reset, and includes the latest developments in the management and feeding of infants—normal, premature, sick, and delicate. Dr. Fischer has compressed into a small volume a large mass of valuable, scientifically accurate information, presented in simple language so that any one who can read can understand what he says and can follow the directions which he gives.

Dyspepsia: Its Varieties and Treatment. By W. Soltau Fenwick, M.D., S. S (London), Late Physician to the Evelina Hospital for Sick Children, London. Second Edition, Revised. Octavo of 515 pages, illustrated. Philadelphia and London. W. B. Saunders Company, 1925. Cloth, $6.00 net.

After nearly fifteen years a second edition of this very comprehensive treatise on dyspepsia has appeared. The author has arranged the discussion of his subject to correspond with the different causative factors involved. After giving the varieties of dyspepsia and their differential diagnosis he takes up dyspepsia due to abnormalities of secretion and in the subsequent chapters, dyspepsia due to failure of muscular power of the stomach, that due to inflammation of the stomach, that due to disturbances of nervous mechanism, that due to displacement of the stomach, that due to foreign bodies, etc., dyspepsia of infancy and old age, dyspepsia dependent upon diseases of other organs, and finally intestinal indigestion.

Diet In Health and Disease. By Julius Friedenwald, M.D., Professor of Gastro-Enterology in the University of Maryland School of Medicine, Baltimore; and John Ruhrah, M.D., Professor of Diseases of Children in the University of Maryland, Baltimore. Sixth edition, thoroughly revised. Octavo of 987 pages. Philadelphia and London: W. B. Saunders Company. 1925. Cloth, $8.00 net.

This is one of the outstanding authoritative works on dietetics and has been largely revised and much of it rewritten. The author suggests that from an entirely empiric branch of knowledge dietetics has become at least half scientific. The application of both chemical and biological methods to the study of the subject has been responsible for marvelous results.

The author believes that whatever relationship there may be if any between diet and such diseases as cancer, skin diseases, arthritis and others, will be shown in the near future.

Diseases of Children for Nurses. Including Pediatric Nursing, Infant Feeding, Therapeutic Measures Employed in Childhood, Treatment for Emergencies, Prophylaxis and Hygiene. By Robert S. McCombs, M.D., Associate in Medicine at the Philadelphia Polycinic; Instructor of Nurses at the Children's Hospital of Philadelphia. Fifth edition, thoroughly revised. Octavo of 581 pages, illustrated. Philadelphia and London. W. B. Saunders Company, 1925. Cloth, $2.75 net.

This textbook for nurses has been pretty thoroughly revised. Much of it has been rewritten and considerable material of importance has been added. Several new illustrations have been introduced and the text brought up to date as fully as possible.

Personal Hygiene Applied, by Jesse Feiring Williams, M.D. Professor of Physical Education, Teachers College, Columbia University, New York City. Second edition revised. 12mo of 414 pages, illustrated. Philadelphia and London. W. B. Saunders Company ,1925. Cloth, $2.00 net.

Written essentially for the lay public this little book can be read profitably by physicians, though they will perhaps not agree in every point with the author. Just at this time any sort of literature that essays instruction in health should find a ready market. This seems to meet the requirements fairly well, some very excellent advice is offered and the chapter on sex hygiene is sufficiently evasive to merit the approved of the most prudish critics.

Medical and Surgical Report of the Roosevelt Hospital, New York. (second series 1925). Published by Paul B. Hoeber, Inc., New York City. Price $5.00.

This report contains articles written by members of the staff expressly for the purpose and reprints of articles that have been published in various journals during the year. Particularly noticeable is a series of articles on partial colectomy by Charles N. Dowd and a series of papers by Rolfe Floyd. The articles are excellently illustrated.

Wells Compend of Gynecology revised by William Benson Harrer, M.D., Instructor in Obstetrics in the University of Pennsylvania, etc. Published by P. Blakeston Son & Co, Philadelphia. Price $2.00.

This being the fifth edition of this compend one must admit there is sufficient demand to justify its publication. While the need for such abbreviated texts on such large and important subjects may be questioned, this particular one seems to have some merit and will perhaps very excellently serve the purpose for which it is intended.

Clinical Features of Heart Disease ,an interpretation of the mechanics of diagnosis for practitioners, by Lerov Crummer, M.D., Professor of Medicine, University of Nebraska. Published by Paul B. Hoeber, Inc., New York. Price $3.00.

In the first place this book is very easy to read. The author has what is sometimes described as a facile pen. The subject is discussed according to the more recent ideas of cardiac disease and is not so technical as to prevent its being easily understood. The author lays much stress upon the history in cardiac cases and also upon the valuable information that may be gained by inspection. It will appeal to the practitioner who wishes to keep up to date but is likely to be impatient with the very technical treatises on this subject.

Ophthalmic Plastic Surgery, Newer Methods of, by Edmund B. Spaeth, M.D., Chief, Eye Clinic, Walter Reed U. S. Army Hospital, Washington, D. C., etc. Published by P. Blakistons Son & Co., Philadelphia. Price $5.00.

This is a very complete work on the subject of plastic surgery of the eye, giving in careful detail the principles involved, and impresses the need for study of each individual case before attempting an operation. The various steps of many operations are described and illustrated. In general the book shows the marked advances that have been made in this department of surgery.

Simplified Nursing, by Florence Dakin, R.N. Published by J. B. Lippincott Company, Philadelphia.

This book is prepared for the instruction of wives and mothers in the proper methods to be used in the care of the sick. It tells about ventilation, bed making, disinfection and sterilization, bathing, etc. It should be a valuable book to have in most households.

The Medical Clinics of North America. (Issued Serially) one number every other month. Volume VIII, Number VI, (Boston Number—May, 1925.) Octavo of 278 pages and 47 illustrations and complete index to Volume VI. Per clinic year (July 1924 to May 1925.) Paper $12.00; Cloth $16.00; Philadelphia and London: W. B. Saunders Company.

The Boston number of the clinics contains some very instructive material. The first two articles deal with the heart, one by Morse and one by Locke. Pratt's clinic on gout is instructive. Lee discusses the subject of vasomotor rhinitis and hypothyroidism. Davidson has a clinic on the end results of the medical treatment of peptic ulcer. McClure has an interesting article on the diagnosis of peptic ulcer and cholecystitis. Joslin, Root and White present a very interesting discussion on diabetic coma and its treatment.

Physical Diagnosis of Diseases of the Chest. By Joseph H. Pratt, A.M., M.D., and George E. Bushnell, Ph.D., M.D. Octavo of 522 pages with 166 illustrations. Philadelphia and London: W. B. Saunders Company, 1925. Cloth, $5.00 net.

The author brings out a very important necessity in the accurate interpretation of physical findings in the examination of the chest, that is familiarity with the finding in the normal chest. He has described those ordinarily observed and has included some not usually mentioned. The work as a whole is a very thorough exposition of the subject giving in detail the various methods available for examination of the chest and the proper interpretation of the signs discovered.

———R———

MEDICAL SCHOOL NOTES

At the University of Kansas commencement on June 10, thirty-two graduates received the Degree of Doctor of Medicine. Ten nurses received the certificate of Nurses Training. Of the thirty-two who received the M.D. Degree, all but three are residents of Kansas. The other states represented are Missouri, Arizona, and New Mexico. Following is a list of the grduates with their interne appointments. Two of the graduates have not received interne appointments, but expect to start their service some time the first of the year. These are Dr. Harold M. Roberts, who is spending the summer abroad, and Dr. Harry W.

Seiger, who will spend the summer in clinics in Kansas City.

Bartel, Ferdinand G., Wesley Hospital, Wichita, Kansas.

Bennett, Charles A., Bell Memorial Hospital, Kansas City, Kansas.

Blew, Clarence L., Montreal General Hospital, Montreal, Canada.

Dewolf, Henry F., Cleveland City Hospital, Cleveland, Ohio.

Dillon, Tony G., Bell Memorial Hospital, Kansas City, Kansas.

Ford, W. Virgil, Trinity Lutheran Hospital, Kansas City, Missouri.

Harrison, Alvie, Louisville City Hospital, Louisville, Kentucky.

Hart, Crozier S., Bell Memorial Hospital, Kansas City, Kansas.

Henry, Schubert D., Saint Francis Hospital, Wichita, Kansas.

Hobbs, Russell E., Kansas City General Hospital, Kansas City, Missouri.

Hume, Harold C., Wichita City Hospital, Wichita, Kansas.

Johnson, Vansel S., Fifth Avenue Hospital, New York City.

Knapp, Leslie E., Saint Francis Hospital, Wichita, Kansas.

Morris, Benjamin, Montreal General Hospital, Montreal, Canada.

Newton, Hiram D., Bell Memorial Hospital, Kansas City, Kansas.

Olsen, Andrew A., Mount Sinai Hospital, Cleveland, Ohio.

Palmer, Harold W., Cleveland City Hospital ,Cleveland, Ohio.

Peete, Don Carlos, Bell Memorial Hospital, Kansas City, Kansas.

Pitman, Will D., Saint Joseph Hospital, Concordia, Kansas.

Ricker, Sam F., Iowa Lutheran Hospital Des Moines, Iowa.

Rigdon, Jonathan, Saint Margarets' Hospital, Kansas City, Kansas.

Roach, William F., Cincinnati City Hospital, Cincinnatti, Ohio.

Rollow, Herbert, Saint Francis Hospital, Wichita, Kansas.

Ryan, Clarence J., Seaside Hospital, Long Beach, California.

Saylor, Edward L., Western Pennsylvania Hospital, Pittsburgh, Pennsylvania.

Weaver, James, Fifth Avenue Hospital, New York City.

Wiebe, Dietrich V., Kansas City General Hospital, Kansas City, Missouri.

Winkler, John J., Cleveland City Hospital, Cleveland, Ohio.

The nurses who received Degrees, are as follows: Miss Dorothea Camp, Miss Maurine Whipple, Miss Hazel Coghill, Miss Neva Gingrass, Miss Annie Turner, Miss Marjorie Davison, Miss Dorothy Davison, Miss Alice Coldiron, Miss Mabel Unruh, Mrs. Kathryn Bassford.

Dr. R. L. Haden has been elected a member of the American Society for Clinical Investigation.

At the recent meeting in Atlantic City, Dr. Frank C. Neff was elected President of the American Association of Teachers of Children's Diseases. Their next meeting will be held in Dallas, Texas, the day preceding the meeting of the American Medical Association.

Dr. N. F. Ockerblad read a paper before the last meeting of the American Urological Association in St. Louis. He reported observations on the creatinin kidney function test.

Dr. R. H. Major and Dr. R. L. Haden have been elected members of the American Climatological and Clinical Association.

Dr. E. G. Padfield of Salina, Kansas, recently spent several days attending clinics at the Medical School.

Dr. R. M. Isenberger has been appointed associate professor in the Department of Physiology and Pharmacology. Dr. Isenberger attended the University of Kansas until his junior year, and then transferred to the Western Reserve Medical School, where he finished.

Dr. R. M. Urie of Parsons, and Dr. W. E. McKinley of McDonald visited the Medical School recently.

Dr. T. G. Orr, and Dr. R. L. Haden read a paper at the meeting of the American Medical Association before the section on Obstetrics, Gynecology and Abdominal Surgery. The title of the paper was "Reducing the Surgical Risk in Intestinal Obstruction." During the session a paper was also presented before the American and Canadian Association of Anaesthetists on "Preoperative Surgical Preparation."

An American Health Congress

In order to give health workers from every part of the country a bird's-eye view of the public health movement in its broadest aspects, the National Health Council at 370 Seventh Avenue, New York City, has planned for an American Health Congress

to be held at Atlantic City during the week of May 17, 1926.

The leading authorities on each phase of the public health movement; such as tuberculosis, cancer, heart disease, blindness, social and mental hygiene, public health nursing, preventable diseases, and positive health education for both children and adults, will present the latest and most authoritative findings and programs for the solution of these problems.

Among the groups that will cooperate in the congress are the following members of the National Health Council:

American Child Health Association; American Heart Association; American Public Health Association; American Red Cross; American Social Hygiene Association; American Society for the Control of Cancer; Conference of State and Provincial Health Authorities of North America; National Committee for Mental Hygiene; National Committee for the Prevention of Blindness; National Organization for Public Health Nursing; National Tuberculosis Association; United States Children's Bureau; United States Public Health Service; Women's Foundation for Health.

In addition to these groups, it is anticipated that leading health associations of Canada, Mexico and elsewhere will cooperate in this congress.

The American Nurses Association, the National Organization for Public Health Nursing, and the National League of Nursing Education, will hold their regular biennial meeting during this same week at Atlantic City. The General Federation of Women's Clubs will meet directly after the congress.

Already well organized plans are under way. The Atlantic City convention authorities and the hotels will cooperate to the fullest extent. The Steel Pier has been engaged for headquarters and meetings will be held there and at the nearby hotels on the boardwalk. Part of the space on the Steel Pier will be used for commercial and educational exhibits. A strict censorship will be exercised, however, in order that the exhibits may conform with the high standards of such a meeting.

—R—

Zinc Stearate Dusting Powders for Infants

The second report of the Committee on Accidents from Zinc Stearate Dusting Powders appointed by the Board of Trustees of the American Medical Association has recently been published. Copies of this report, with an appendix showing the opinions of thirty-four representative pediatricians on the therapeutic value of such powders, can be obtained on request. Address, Committee on Zinc Stearate Dusting Powders, American Medical Association, 535 North Dearborn Street, Chicago, Illinois, enclosing a self-addressed, stamped envelope.

There were reported to the Committee 131 accidents from the inspiration of zinc stearate dusting powders by infants. Twenty-eight of the victims died. The committee conferred with representatives of certain distributors concerning the dangers incident to the use of such powders on infants. Following a meeting held at the headquarters of the American Medical Association, these distributors agreed to cooperate by adopting self-closing containers for the powders they distribute and agreed that cautionary labels are desirable. Opinions were secured from thirty-four representative pediatricians concerning the therapeutic value of zinc stearate dusting powders. Thirty-one believe that such powders have no advantage over other dusting powders, that they constitute a hazard to infant life, and that their use should be discouraged.

—R—

Noted Chemists Will Give Aid to Hoover

The appointment of an advisory committee composed of outstanding members of the chemical industry to cooperate with the Department of Commerce has been announced by Secretary Hoover.

The purpose of this committee is to assist the chemical division of the department in mapping out a program of work which will be of the most practical and immediate benefit to the industry.

The membership of the committee, as announced by Secretary Hoover, includes Dr. Leo Bakeland, president, American Chemical Society and inventor of bakelight; Dr. A. S. Burdick, president of the Abbott Laboratories of Chicago, and formerly president of the American Drug Manufacturers' Association; Dr. H. E. Howe, editor of the Journal of Industrial and Engineering Chemistry; Dr. Charles H. Herty, president of the Synthetic Organic Chemical Manufacturers' Association; Henry Howard, chairman of the board of governors of the Manufacturing Chemists' Association; G. Ober, president of G. Ober & Sons, Baltimore, and past president of the National Fertilizer Association; E. C. Trigg, president of John Lucas & Co.,

Philadelphia, and president of the Agricultural Insecticide and Fungicide Association; A. Cressy Morrison, president of the Acetylene Gas Manufacturers' Association, and S. W. Wilder, secretary of the Manufacturing Chemists' Association.

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Improved Method for Rabies Prevention

Time was, and not so very long ago, when a mad dog could terrorize a whole community; to be bitten by such an animal was not merely a death sentence, but a sentence to the most horrible of deaths. The resourcefulness and persistent energy of one man, a pioneer, has changed all this. Pasteur's method of preventing hydrophobia was indeed the dawning of a new day. Still, for many years it was necessary for the victims of mad-dog bites to be taken to "institutes" for treatment, and not only failure but injury from the treatment was possible.

A pioneer is most honored by those who catch his spirit and continue to go forward. The Pasteur method has been improved. "Institutes" are no longer necessary. Toxicity has been found to be no essential factor in the immunizing treatment, and Rabies Vaccine is now available that is incapable of injuring the patient, no matter what dose in the "course" is given first or last—all being alike. And, strange to say, this Vaccine has been demonstrated to confer a higher degree of immunity than the desiccated spinal cord originally used.

Our readers are referred to the advertisement in this issue entitled "The Prevention of Hydrophobia," and for more complete particulars to Parke, Davis & Co., Detroit, Mich., who have recently issued a free booklet on "Rabies Vaccine."

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Amebic Abscess of the Liver

A case of amebic abscess of the liver complicated by subphrenic abscess is reported by Alexius McGlannan, Baltimore (*Journal A.M.A.*, June 27, 1925). A few of the important features of this case are: The danger of closed aspiration in suspected liver abscess. At the first operation, although nothing was obtained by aspiration, pus exuded from the liver when the needle was withdrawn. The difficulty of finding amebas in the pus: In spite of repeated examinations, these organisms were not found until the wall of the abscess was scraped on the twenty-fourth day after the operation; the prompt improvement after the general treatment by emetin and the local treatment by quinin solution was inaugurated, and the final local use of emetin; in all, the patient was given 45 grains (2.9 gm.) of this drug; the value of the roentgen ray in distinguishing the subphrenic abscess from an empyema; the occurrence of this large amebic abscess in the liver of a patient who had never suffered from dysentery; the relative infrequency of subphrenic abscess as a complication of amebic abscess of the liver. Rogers found five such abscesses in eighty-five cases, as against thirty lung abscesses, six empyemas and three cases of suppurating pericarditis in the same series.

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Ketogenic Diet in Epilepsy

Thirty-seven patients with essential epilepsy have been treated by M. G. Peterman, Rochester, Minn. (*Journal A.M.A.*, June 27, 1925), for periods of from three to thirty months by means of a high fat diet sufficiently restricted in carbohydrate and protein to produce ketosis. In two patients, no change was noted. One patient improved while under control, but was lost from observation. Three patients remained free from convulsions for from three to eight months, and were then not heard from. Twelve have improved, and nineteen have been free from attacks since the institution of this treatment. Thirty-two of the patients are still under observation. The general physical development and growth have been normal; the mental development has also been normal, and exceptionally good in centain cases. Resistance to infection seems to be in no way diminished by this form of treatment. Special attention is called to the fact that five of the patients have gone through severe infections, including scarlatina, pertussis and acute upper respiratory infections, with normal convalescence. The diets were not altered during the illness.

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Focal Infection in Peptic Ulcer

The case histories of three patients, with animal protocols in which the peptic lesion was seemingly due to dental infection, and three in which the tonsils were the source of the infection, are reported by Russell L. Haden and Peter T. Bohan, Kansas City, Kan. (*Journal A.M.A.*, Feb. 7, 1925). Experimental proof of a causal relationship of chronic foci of infection to an existent peptic ulcer was obtained by the injection into animals of bacteria recovered from the focus. In twelve patients, dental infection was probably the primary cause. Forty-five rabbits were injected with cultures

from dental foci in three patients; 53 per cent. of the animals showed peptic lesions at necropsy. Only 7 per cent. of 535 control animals similarly injected had such lesions. Eleven rabbits were injected with cultures from the tonsils of five patients. Ten showed at necropsy lesions of the stomach or duodenum. The duodenal lesions observed experimentally are limited to the duodenal bulb, just as they are in man. The gastric lesions have a similar anatomic distribution. The evidence presented is good proof of the infections theory of peptic ulcer. The authors urge that patients with peptic ulcer should be thoroughly studied from standpoint of chronic infection, and all possible foci removed. Gastroduodenal malfunction without demonstrable focal lesions may likewise be a manifestation of focal infection.

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Significance of Hemoptysic Onset in Tuberculosis

Two hundred and forty-five, or 8 per cent, of the total number of patients admitted to the Trudeau Sanatorium during a period of twelve years gave a history of hemoptysic onset, as reported by F. B. Trudeau, Saranac Lake, N. Y., (*Journal A.M.A.*, June 13, 1925). The sputum was positive in 119, or 48.57 per cent, of these cases, while tubercle bacilli had been found in the sputum of thirty more patients reported, before they entered the institution. Counting in these thirty cases, 149, or 60.81 per cent, of the 245 cases had positive sputum. In 171, or 69.83 per cent, of this series of hemoptysic onset cases, a confirmatory diagnosis was made in the roentgenray laboratory. Rales usually moderately coarse in character, situated in the upper half of either chest, and not clearing after cough, were present in 196, or 80 per cent, of the cases of this series. Ten, or 4.08 per cent, had had at some time a plurisy with effusion which could not be explained by any cause other than tuberculosis. In following these 245 patients from one to twelve years after leaving the sanatorium and classifying them under the headings of "well," meaning well and working for at least two years, "living" meaning either that they are still continuing their treatment or else that nothing more is known about them other than the fact that they are still living, "dead," and "unknown," it was learned that 114 are well; sixty-three are living; forty-seven are dead, and twenty-one were not heard from. The prognosis in this type of case is no better or worse than in any other mode of onset of this disease.

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Treatment of Gastric Ulcer by the Method of Duodenal Alimentation

In the treatment of gastric or duodenal ulcer by means of prolonged duodenal alimentation, A. L. Garbat, New York (*Journal A.M.A.*, June 27, 1925), says that stress should not be laid entirely on the exclusion of food from the stomach. Great importance is attributed to the frequent and concomitant administration of antacids or alkalis by mouth before each duodenal feeding, in order to neutralize or prevent the gastric secretion which is almost regularly associated with the duodenal alimentation. The two tube method has shown that a reflow of duodenal feeding into the stomach occurs more frequently than is usually believed; this occurs with improper position of the tube, which cannot always be recognized, or with a patent pylorus of the stomach. Antacid therapy will help to minimize the disadvantages resulting from such regurgitation.

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As the result of experiments by Duncan C. Walton, Edgewood, Md. (*Journal A.M.A.*, May 23, 1925), a 1 per cent copper sulphate solution is recommended as a treatment for white phosphorus burns. Whenever a phosphorus burn is received, a large sponge of absorbent cotton should be saturated with a 1 per cent copper sulphate solution, and applied to the burning phosphorus. Within two or three minutes, it will be possible to remove the sponge. The copper-coated phosphorus should then be removed by forceps or by irrigation, and the case then treated like any other burn.

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Physical Fitness for Orphans

In fourteen institutions for the care of orphans, ranging in membership from fifty to 300 children, it was found by William R. P. Emerson, Boston (*Journal A.M.A.*, May 2, 1925), that from 30 to 50 per cent were 7 per cent or more underweight for height, and from 50 to 67 per cent were under average weight for height. An application of the nutrition program demonstrated that within periods of from three to twelve months it was possible practically to eliminate underweight from the members of this group and bring the children into a state of normal physical fitness.

Roseola of the Conjunctiva

A subacute exanthematous conjunctivitis, peculiar to secondary syphilis occurred in three cases reported by Samuel Morse, New York (*Journal A.M.A.*, April 25, 1925). These patients never knew or were informed of a syphilitic infection, and had no other evidences of it. The history given was that the inflamed eyes would not improve under the ordinary treatment for conjunctivitis, as known.

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Some Truths About Alcohol

Any one who attempts to arrive at an unbiased conclusion regarding the physiologic action of moderate amounts of alcohol on the human body realizes promptly that the decisive authentic information on the subject is surprisingly meager. There is no dispute about the ill effect of excessive indulgence in alcohol on individual and national efficiency; the habitual drunkard is a menace alike to himself and to the society that tolerates him. Yet many persons throughout the world, to whom the designation of drunkard could certainly not be applied with propriety, use alcoholic beverages moderately and secure therefrom not a little comfort and pleasure. It is a debatable question whether or not the enjoyment of the social glass must be prescribed because a large class misuse alcohol. The moderate users are frequently represented as those who "use" alcohol, as distinguished from those who "misuse" alcohol.

Physicians cannot avoid a consideration of the alcohol problem. It not only confronts them as it does every thinking person, but often is actually "thrust" on them by the exigencies of their daily routine. Probably the most debated feature centers in the inquiry as to whether alcohol can in any sense be regarded as a food. This is a question that demands a defensible answer regardless of the inquirer's personal habits, social proclivities or political convictions. Such a decision cannot be formulated on the basis of offhand impressions, hearsay evidence or subjective reasoning. It demands and deserves scientific analysis. Consequently, many persons will be interested in the statement of a physiologist having unusual qualifications for arriving at a conclusion when he asserts at length that the experimental evidence about the debated food value of alcohol "is extensive and admits of no controversy." Among the clearly proved facts that further study is not likely to modify to any degree, F. G. Benedict,[1] the director of the Boston Nutrition Laboratory of the Carnegie Institution of Washington, includes the observation that alcohol in not too large doses—that is, about 72 gm. daily—is oxidized in the human body, and the energy that it furnishes in its oxidation may contribute to keeping the body warm, to replacing other nutrients in the diet ,and possibly to the performance of muscular work. Seventy-two grams of alcohol, contributing 500 calories to the daily ration, are more completely burned than 500 calories supplied in the form of almost any other substance, with the possible exception of pure sugar. This has been demonstrated clearly by actual measurements of the heat output of man inside a respiration calorimeter, first, when subsisting on an ordinary diet, not containing alcohol, and then under exactly the same experimental conditions when 500 calories of fat or carbohydrate, or both, were replaced by 500 calories of alcohol.

This interpretation of alcohol as a food is, then, based on the demonstration that it can replace fat and carbohydrate in no small measure in the diet. Benedict hastens to remind us, however, that there are two functions of food that probably cannot be filled by alcohol. It is highly improbable that alcohol becomes a part of organized tissue, and its exact function in the energy required for the performance of muscular work is by no means clear. We know, Benedict adds, that fat, carbohydrate and protein do become a part of organized tissue ,and do contribute to the performance of muscular work.

Viewed in the foregoing light, it might seem as if alcohol, being a food, should be physiologically permissible, if used in moderation. In attempting to meet the crux of the situation by determining the physiologically "permissible" amount for daily use, science has also recently indicated that something more than the danger of incipient intoxication must be taken into account. All the more recent psychologic tests with alcohol ingested even in small amounts agree in the demonstration of lessened organic efficiency resulting from the absorption of the substance.[2] From two to four hours after moderate doses of alcohol, practically all persons are affected with general depression of neuromuscular processes, lessened visual acuity, and lessened motor coordinations of eye and hand. Benedict argues that in assessing the value of alcoholic beverages for the use of mankind, the true scientist may not disregard the obvi-

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A. L. LUDWICK, A.M., M.D., Asst Supt.

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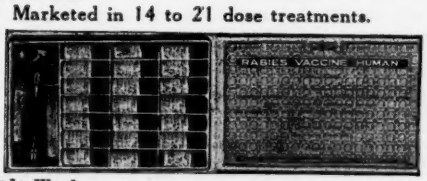

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ously beneficial and seemingly legitimate phases of its effect on man. He must give recognition to the fact that, used in moderation, besides being an easily digestible source of calories, it results in a great deal of gratification and pleasure to enormous numbers of people, giving them relaxation at times and again, by releasing the inhibitions, a stimulus. Nevertheless, it seems certain that at any time when one is confronted with a task that calls for a clear head, a keen vision and a steady muscle, there is no "permissible" dose of alcohol. —*Jour. A.M.A.*, May 30, 1925.

1. Benedict, F. G.: Alcohol and Human Physiology, Indust. & Engin. Chem. 17:423 (April) 1925.
2. Miles, W. R.: Pub. 266, Carnegie Institution of Washington, 1918; Pub. 333, 1924.

℞

Outlying Acidosis

The acidity developing in the ischemic tissue is doubtless referable in the main to accumulated carbon dioxide, according to Peyton Rous and D. R. Drury, New York (*Journal A.M.A.*, July 4, 1925); for when the yellow patch resulting from an epinephrin injection is exposed to the air by eversion of a flap of skin, it rapidly becomes deep pink, a change that is especially impressive when the surrounding tissue has already decolorized. The acidity is greater than can be measured in terms of phenol red, but not much greater, as is shown by tests on rats stained with bromcresol or chlorphenol red. The maximum color alteration observed after epinephrin is such as would be indicative, under control conditions, of a fall from approximately *p*H 7.3 to about *p*H 6.4. The authors have given the name "outlying acidosis" to this condition, meaning thereby a tissue acidosis independent of the reaction of the blood, because lying beyond the influence of this fluid. The outlying acidosis consequent on carbonate administration is encountered only when anhydremia develops, as the hematocrit readings prove. Under such circumstances, with the blood bulk rapidly decreasing, much the same vascular shutdown is known to take place as after a bleeding. The authors experiments have shown that a variety of substances and conditions giving rise to anhydremia will cause outlying acidosis; for example, hypertonic dextrose solution by mouth, or purgation with sodium sulphate. The acidoses thus induced are not uninfluenced by the means taken to produce the anhydremia. Stained rats given dextrose solution become intensely yellow before death, a hue attained by controls only several hours post mortem; there is a tendency for the blood *p*H to fall; and skin flaps exposed to the air while the animal is yet alive show scarcely any change toward pink, an observation which would suggest that the local acidity is due in the main to acids that are not volatile. The possibility suggests itself that tests can be made for outlying acidosis by local injections of an unbuffered solution of indicator.

℞

Combined Gastric and Duodenal Ulcer

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2. My preliminary education was obtained at_____
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_____located at_____ from which I
(City and State)

graduated in the year 1_____and received the degree of_____

3. My medical education was obtained at_____
(Name of Medical College)

_____located at _____

from which I graduated in the year 1_____

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(Name of state and date of license under which you are practicing)

5. I have practiced at my present location_____years; and at the following places for theyears

named _____
(Name each location and give dates)

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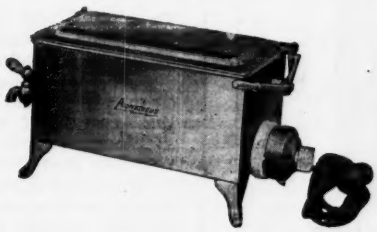

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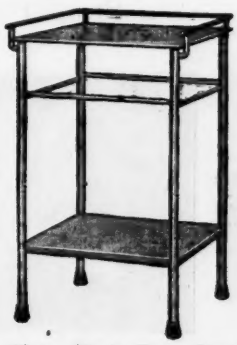

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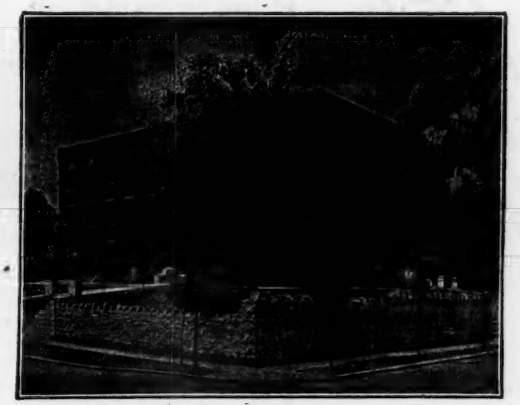

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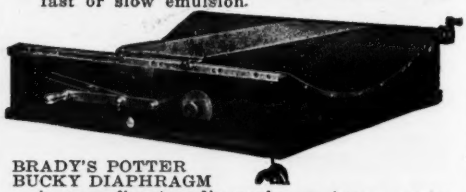

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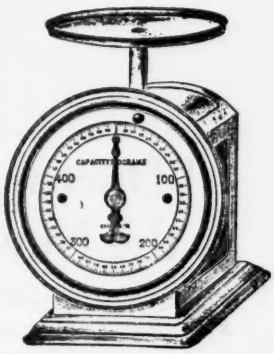

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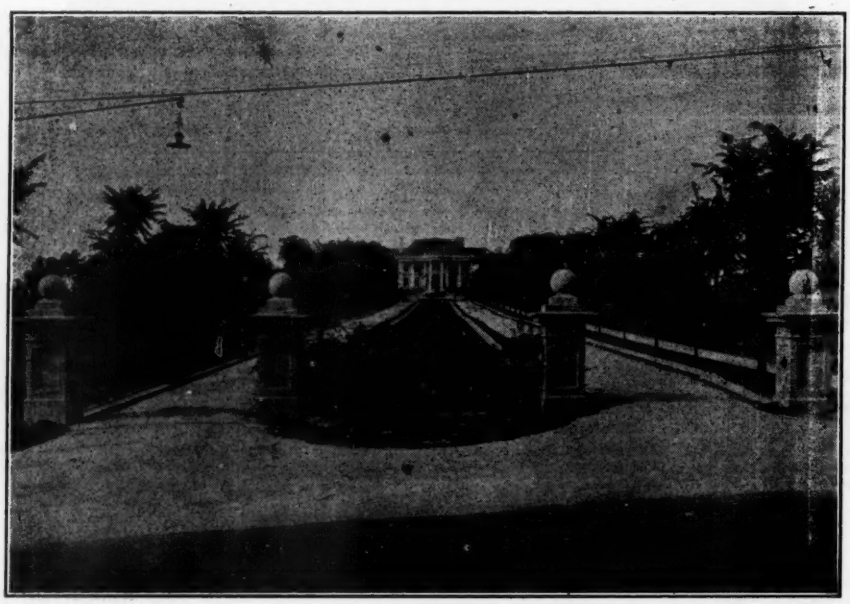

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Atchison	M. T. Dingess, Atchison	T. E. Horner, Atchison	1st Wed. ex. July and August
Barton	T. J. Brown, Hoisington	C. W. Zugg, Great Bend	1st Tuesday, Jan., Apr., June, Oct.
Bourbon			2nd Monday
Brown	F. G. Poutre, Horton	R. T. Nichols, Hiawatha	2nd Friday
Butler	C. E. Boudreau, El Dorado	L. L. Williams, El Dorado	2nd Friday
Central Kansas			
Cherokee	R. C. Lowdermilk, Galena	W. H. Iliff, Baxter Springs	2nd Monday
Clay	H. E. Potter, Clifton	G. W. Bales, Clay Center	2nd Wednesday
Cloud	Andrew Struble, Glasco	R. E. Weaver, Concordia	Last Thursday
Coffey			
Cowley	E. A. Tufts, Arkansas City	J. H. Douglass, Arkansas City	1st Tues. ex. July, Aug., Sept.
Crawford	H. L. Church, Pittsburg	C. L. White, Pittsburg	3rd Thursday
Dickinson	S. N. Chaffee, Talmadge	T. R. Conklin, Jr., Abilene	
Doniphan		W. M. Boone, Highland	1st Tues. Jan., Apr., July, Oct.
Douglas	H. T. Jones, Lawrence	E. P. Sisson, Lawrence	1st Thursday
Elk		F. L. Depew, Howard	Called
Finney	G. R. Hastings, Lakin	W. J. Stilson, Garden City	
Ford	T. L. McCarty, Dodge City	W. F. Pine, Dodge City	Last Wednesday
Franklin	E. B. Gossett, Ottawa	F. A. Trump, Ottawa	
Harper	H. L. Galloway, Anthony	W. Cox, Anthony	3rd Wde., Mar., June, Sept., Dec.
Harvey			1st Monday
Jackson	T. M. Greenwood, Holton	C. A. Wyatt, Holton	1st Wed., Jan., Apr., July., Oct.
Jewell			
Johnson			
Kingman	R. W. Springer, Kingman	H. E. Kaskins, Kingman	2nd Thursday ex. summer months
Labette		C. D. Pace, Parsons	4th Wednesday
Leavenworth			1st Monday
Lincoln	H. L. Hinkley, Barnard	M. Newlon, Lincoln	2nd Thursday
Linn	J. R. Shumway, Pleasanton	H. L. Clarke, LaCygne	2nd and 4th Fridays
Lyon		J. S. Fulton, Emporia	1st Tuesday
Marion	J. H. Saylor, Ramona	S. P. Loomis, Lost Springs	2nd Wednesday
Marshall		J. W. Randell, Marysville	Last Thurs., July, Oct., Jan., Apr.
Meade-Seward	W. F. Fee, Meade	J. W. Messersmith, Liberal	
Miami	L. A. Van Pelt, Paola	P. E. Kubitschek, Osawatomie	Last Friday
Mitchell			
Montgomery	W. F. Coon, Caney	J. A. Pinkston, Independence	2nd Friday
McPherson	A. Engberg, McPherson	L. F. Quantius, McPherson	
Nemaha		S. Murdock, Sabetha	Last Thursday every other month
Neosho	W. E. Royster, Chanute	E. A. Davis, Chanute	Second Monday
Norton-Decatur	C. E. Henneberger, Atwood	R. G. Breuer, Norton	Called
Osborne	J. E. Henshall, Osborne	S. J. Schwaup, Osborne	
Pawnee			2nd Tuesday
Pratt		L. C. Joslin, Cullison	1st Monday
Reno	H. M. Stewart, Hutchinson	Louise Richmond, Hutchinson	4th Friday
Republic	V. C. Haggman, Scandia	H. D. Thomas, Belleville	2nd Thursday in November
Rice	J. S. McBride, Lyons	C. E. Fisher, Lyons	Last Thursday
Riley	W. M. Reitzel, Manhattan	A. H. Bressler, Manhattan	2nd Monday
Saline	E. G. Ganoung, Salina	W. M. Sutton, Salina	2nd Thursday
Sedgwick	W. G. Gillett, Wichita	G. E. Milbank, Wichita	1st and 3rd Tuesday
Shawnee	H. B. Stewart, Topeka	E. G. Brown, Topeka	1st Monday
Smith	O. C. Reed, Kensington	H. Haerle, Athol	Called
Stafford	R. E. Stivinson, St. John	J. T. Scott, Stafford	2nd Wednesday
Sumner	A. R. Burgess, Peck	W. H. Neel, Wellington	Last Thursday every quarter
Washington		W. M. Earnest, Washington	
Wilson	W. H. Addington, Altoona	E. C. Duncan, Fredonia	2nd Monday.
Woodson	H. W. West, Yates Center	M. S. Reynolds, Yates Center	
Wyandotte	L. F. Barney, Kansas City	J. W. Sparks, Kansas City	Every 2nd Tues. ex. summer month